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A LINGUISTIC APPROACH TO THE TEACHING OF ENGLISH AS A FOREIGN LANGUAGE TO KINDERGARTEN PUPILS WHOSE PRIMARY LANGUAGE IS SPANISH.
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*MEXICAN-AMERICANS, *ENGLISH INSTRUCTION, *KINDERGARTEN CHILDREN, *PHONOLOGY, *TEACHING TECHNIQUES, SPANISH, ORAL ENGLISH, TEACHING GUIDES, LINGUISTICS, CALIFORNIA, FRESNO COUNTY, MINNEAPOLIS, MINNESOTA,

THIS STUDY WAS DESIGNED TO DETERMINE WHETHER A LINGUISTICALLY ORIENTED PROGRAM OF ENGLISH LESSONS DESIGNED FOR KINDERGARTEN CHILDREN WITH SPANISH-SPEAKING BACKGROUNDS COULD SIGNIFICANTLY ACCELERATE PUPIL CONTROL OF ENGLISH. THE STUDY OBJECTIVES INCLUDED--(1) IDENTIFICATION AND DEVELOPMENT OF ADEQUATE TESTS MEASURING SUBJECT S COMMAND OF ENGLISH SOUNDS, GRAMMAR, AND VOCABULARY,(2) DEVELOPMENT OF SUITABLE EDUCATIONAL MATERIALS TO PROVIDE INTENSIVE ENGLISH LANGUAGE DRILL, AND (3) PROVISION OF SPECIAL TRAINING FOR KINDERGARTEN TEACHERS USING THE DESIGNED MATERIALS AND PROCEDURES. MEASUREMENTS WERE MADE ON THREE POPULATION GROUPINGS BASED ON PRIOR EXPERIENCE WITH THE PROCEDURES AND MATERIALS EMPLOYED. THE CONCLUSIONS DRAWN WERE--(A) THE PHONOLOGY, SYNTAX, AND VOCABULARY OF ENGLISH CAN BE LEARNED BY SPANISH LANGUAGE-ORIENTED KINDERGARTEN PUPILS THROUGH FORMAL CLASSROOM PROCEDURES, AND THE DIFFICULTIES ARE IN THE AREA OF CLASSROOM INSTRUCTIONAL PRACTICES RATHER THAN LINGUISTIC THEORETICAL DESIGN, (B) THE MOST SIGNIFICANT IMPROVEMENTS IN PHONOLOGY AND SYNTAX ARE MADE BY PUPILS OF MINIMAL ENGLISH FACILITY, (C) BOYS RESPOND MORE SIGNIFICANTLY TO PHONOLOGICAL INSTRUCTIONS THAN GIRLS, (D) BASED ON THE RESULTS OF THE PHONEMIC PRODUCTION SURVEY, A MAJOR OBSTACLE IN DESIGNING MORE EFFICIENT ENGLISH LANGUAGE PROGRAM IS THE WIDE RANGE OF PHONEME PRODUCTION ABILITIES OF BEGINNING KINDERGARTEN SPANISH-SPEAKING PUPILS. (GC)

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
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A Linguistic Approach to the Teaching of English as a Foreign Language to Kindergarten Pupils Whose Primary Language Is Spanish

Cooperative Research Project 2821

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1966

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CHAPTER I

UNITED STATES OFFICE OF EDUCATION RESEARCH PROJECT 2821

Introduction

Studies of the interrelationship of language deficiency, cultural difference, cultural deprivation, and school failure are of critical, immediate importance to the accomplishment of the national educational goals. The present study was begun in the spring of 1964 and though not part of the major governmental effort HEADSTART will, hopefully, contribute to that interdisciplinary integrity essential to the solution of contemporary social and cultural problems.

The research reported herein concerns the teaching of English as a second language to kindergarten pupils whose primary language is Spanish. The study is limited to the extent that it is rather specialized, emphasizing improvement of classroom language teaching as a variable in the improvement of the overall scholastic adjustment of the Spanish surname pupil.

The population used in this study is found in Central California, in Fresno County, a rich agricultural area traditionally dependent on Mexican-American farm labor for its economic well-being. Many of the adults living in this area have been born in Mexico, are naturalized citizens but use various Spanish dialects in their homes and community. The economic consequences of this dependence on a foreign language is an additional impediment to the educational consequences which are reviewed in this report.

A survey headed by Fresno Municipal Judge Kenneth Andreen (Fresno Bee, April 2, 1964) showed that 38 percent of all families of Spanish-speaking descent in Fresno County live in abject poverty. Additionally, while only 10 percent of the County residents have Spanish surnames, 24 percent of the residents receiving welfare payments have Spanish surnames. Another study (Pockets of Poverty in Fresno County: Fresno State College, Business Division, December, 1964) indicated that in the predominantly Spanish-speaking tracts of the county 37 percent of the adult population had no formal schooling of any type. The range of school attendance in the Spanish surname tracts was from 2.7 to 7.7 years. The median years of attendance was reported as 4.6 years. Unemployment was as high as 37 percent of the adult population and 45 percent of the houses were described as "deteriorating."

The economic and educational needs of the Spanish-speaking child are clearly apparent; one urgent and obvious need is proficiency in the English language and the formal education which makes this possible. If review of school failures, analysis of employment records, and examination of welfare dependency rolls are symptomatic of the educational inadequacy of our schools, then surely the Spanish surname population has received scant attention in the curriculum objectives of central California schools.

The educational program herein described and evaluated is an attempt to apply a solution to the language and attendant educational problems of the Spanish-speaking pupil at the kindergarten level.

A detailed description of the theoretical foundations, implementation, and results of the program follows.

Objectives of USOE Project 2821

The research project described here was designed to test the hypothesis that a linguistically-oriented program of lessons in English language specifically designed for kindergarten children of Spanish-speaking background could measurably accelerate their development and control of English. The specific objectives which the overall purpose of the project entailed were:

(1) the identification and development of tests adequate for the measurement of the children's command of the English sound system, grammar, and vocabulary;

(2) the development of educational materials suitable for kindergarten children which would provide intensive drill in English language development;

(3) the provision of special training for kindergarten teachers participating in the project, including the continuing demonstration in the use of instructional materials.

Related Literature

The related literature may be divided into three categories:

(1) materials relevant to the theory of language teaching from a linguistic point of view,

(2) classroom materials for general programs in English as a foreign language,

(3) materials developed for populations similar to the one involved here.

The program described here is heavily indebted for its theoretical basis to the writings of Robert Lado (1964), Charles C. Fries (1947), Earl D. Stevick (1957), Daniel H. Cárdenas (1960), and Robert Politzer (1961). The linguistic theory derived from their writings will be described in the following section.

Most of the materials available in the teaching of English as a foreign language are intended for children in the middle grades, secondary school students, or college students. Few are addressed specifically to the problems of native speakers of Spanish. Almost all assume literacy either at the beginning or early in the course. Of the approximately 200 general texts cited by Ohannessian (1964), only five are intended for children in the lower grades. All of these texts make some use of reading and writing for language instruction. General publications which have influenced the actual make-up of the classroom lessons of the USOE 2821 project include Betty Wallace (1961), Charles Fries and Robert Lado (1953), David Abercrombie (1956), and John Gauntlett (1952).

Excellent linguistically-oriented materials now in print include The Fries American English Series (D. C. Heath & Company, 1952) and the Miami Linguistic Readers (Board of Public Instruction, Miami, Florida, 1965). These are usable only on the first grade level or above.

Typical of the materials growing out of the recognition of the need for pre-school training in English but lacking a sound theoretical basis is the Fresno County publication, The Educational Program for Migrant Children, developed in 1954. This program placed almost its entire emphasis on vocabulary development, although it also included a rudimentary sequence of grammatical topics, including be, the personal and demonstrative pronouns, the auxiliary do, the question transformation with be, and selected interrogative words and prepositions. It included no material whatever for improving the child's command of the English sound system.

A similar Fresno County Schools publication is Helping the Non-English Speaking Child, prepared in 1957 by Oma T. Miles and Ruth E. Anderson. This publication contains an excellent collection of kindergarten games and instruction in teaching a set of concrete nouns and action verbs. It contains no grammatical or phonological drills as such. The very brief and inaccurate paragraph on teaching sounds makes no mention of the problem Spanish speakers encounter in learning to respond to sound features present in English but not in Spanish.

The only extensive linguistically-based materials for Spanish-speaking pre-school children available at the beginning of our project was the Texas Education Agency Bulletin 642 Preschool Instructional Program for Non-English Speaking Children (Austin, 1964). This brief publication includes the theoretical basis for efficient language teaching and instructions for teaching vocabulary, sound systems, and grammar. It also contains a set of activities suitable for kindergarten children. It is not, however, an adequate kindergarten curriculum guide for non-English speaking pupils.

CHAPTER II

LINGUISTIC CONSTRUCI USOE 2821

Because of the widespread use of the phrase "the linguistic method" applied to widely varied methods of language teaching, some extended discussion of our view of the relevance of linguistics to the teaching of languages is required. We have not accepted uncritically either of the two most widely discussed "linguistic" methods, "mis-men" and "audio-lingual," although we have adopted elements of both. As J. M. Catford (1964) has pointed out, no single method can be prescribed for all situations; the language learners' age, previous language training, motivation, objectives, and linguistic environment must all be considered. Kindergarten children differ in all the foregoing respects in as marked a degree as do adult students, a group for whom programs in language learning have been most fully developed and tested by linguists (Moulton, 1962).

The age of the children involved in this project ruled out the extended sessions and intensive drill which formed a large part of the Army language program (Moulton, pp. 86-90). Not even the relatively mechanical pattern drill which such linguistically-oriented language specialists as Nelson Brooks believe is necessary for the establishment of automatic neuro-muscular language control is possible, given a short attention span and lack of experience with formal classroom learning (Brooks, p. 21).

It is in a point of view toward language and in the selection of subject matter rather than in the actual classroom activities of the children that Project 2821 resembles older linguistic approaches. We have adopted the point of view that language is a set of habits common to the members of a given speech community (not a set of rules in a grammar or dictionary), that it is basically spoken, and that it is systematic. In the preparation of the subject matter of the lessons, we have adopted the principle that the language to be learned should be the point of departure (Politzer, p. 7), that listening, speaking, reading, and writing should be presented in that order (Carroll, p. 342), and that, as Fries has pointed out, "the most efficient materials grow out of a scientific descriptive analysis of the language to be learned carefully compared with a parallel descriptive analysis of the native language of the learner" (Fries, 1947, p. 36).

We have assumed that our students' most serious handicap would be interference from their native language. We assumed that this interference would affect both the understanding and the production of English and that drills would have to be specifically designed to deal with both types of interference. Our approach differs from that adopted by Fries and Lado in their University of Michigan materials (1953) and from the Spoken English Series in that it does not depend to any extent on either teacher approval or self-satisfaction to provide the reinforcement that leads to learning; rather all the lessons of the 2821 Program provide situations for natural language use in which the child is rewarded when he succeeds in communicating (Rivers, Ch. VIII). On the other hand, we have followed the audio-lingual approach more closely than some recent critics would recommend. Apart from some rudimentary articulatory description, we have not included any explanation of English structure, requiring our students to infer structure from carefully selected examples (Moulton, p. 90). We have, further, not made use of any written English (Rivers, p. 104). We believe that the pedagogical objections to a pure aural-oral approach have been met in other ways.

As implied above, the first objective of the program was to enable students to recognize and produce all the distinctive sound features of English. While each lesson, from the beginning, focused on a single topic in English phonology, grammar, and lexicon, no such topics were presented in isolation. Learning the names of a set of pictures and hearing and mimicking simple sentences were involved in almost every lesson on English sounds. Phonology continued to be emphasized throughout the grammar and vocabulary lessons (Appendix A, Lesson 76).

We have assumed a definition of the phoneme as a psychological unit: as Politzer (p. 43) puts it, "the association of (sound) variants into a unit perceived . . . as 'one' sound." This is essentially the kind of unit that would be arrived at by the application of a "pair test" (Harris, pp. 30-31). We assumed further that the sound features selected for intensive drill should be those which are distinctive in English but not in Spanish, e.g., the vowels of beat and bit, caught and coat; the consonants of cupboard and covered, ship and chip, and the like (Cárdenas, 1960). A further criterion for the selection was productivity; the most time was devoted to those sound differences that distinguish the largest numbers of (common) minimal pairs. The minimal pair provided the basis for all the sound drills, both for comprehension and for production. Few drills, however, were purely mechanical. In most instances the minimal pairs were incorporated into stories, games, or songs, so that success in the activity required the correct identification of the phonemes being presented.

The English sound features selected for intensive drill as a result of a contrastive analysis of the English and Spanish sound systems were the following:

Vowels

/iy/-/i/	beat-bit	/a/-/ə/	not-nut
/ey/-/e/	bait-bet	/u/-/uw/	pull-pool
/e/-/æ/	bet-bat	/o/-/ɔ/	coat-caught
/æ/-/a/	hat-hot	/ɔ/-/a/	caught-cot

Consonants

/d/-/đ/	ladder-lather	/y/-/ǰ/	yellow-Jello
/b/-/v/	cupboard-covered	/s/-/z/	sip-zip
/š/-/č/	ship-chip	/θ/-/s/	this-sin

In articulatory terms, the lessons attempted to teach the distinction between the simple and the complex, tense vowel nuclei, and between stopped and fricative voiced consonants, voiced and voiceless consonants in positions where this distinction is not significant in Spanish, and certain other less general distinctions. Since the phonological drills were given to both the English and Spanish-speaking children in each classroom, on the assumption that recognition of segmental sound differences is a skill necessary for successful reading, other consonant sounds were also included but drilled less extensively.

The procedures for the presentation of phonological drills are described in detail in a following section. It will be sufficient here to point out that the procedure involved calling the child's attention to a distinctive difference by repetition of minimal pairs permitting the child to notice what are in most instances familiar sounds in unfamiliar positions. For example, while Spanish has the initial sounds in *den* and *then*, they are nondistinctive, *d* occurring only at the beginnings of words and *th* (θ) only elsewhere. The children were next required to identify the new sounds in words read by the teacher, including minimal pairs with appropriate pictures and objects. Finally, the children were required to produce the English sounds in the correct positions.

Whole words were used almost exclusively in these drills (Rivers, p. 109). Apart from the fact that, for the linguistically unsophisticated, sounds in isolation are uninformative, our objective was to teach the children to recognize not only the most widely distributed allophones, but also all the other positional variants of the English phonemes.

The reader is referred to Appendix A, Lessons 4, 5, 6, 8, 10, and 52 for illustrations of the application of our linguistic assumptions to the construction of drills.

The selection of grammatical topics was also based on the considerations of contrast between the grammatical systems of English and Spanish and on frequency of occurrence in general English. Using similarity of grammatical meaning as the point of reference, it is obvious that English and Spanish differ in their selection of grammatical signals: English expresses the meaning "future" with various function words, Spanish by suffixation; Spanish may express the demonstrative subject by verb inflection, English by the use of pronouns or demonstrative words (e.g., Spanish Es un muchacho; English This/It/He is a boy.) When both languages use the same process, its specific form may be different; e.g., both languages use a negative function word but order it differently relative to the verb; both languages use word-order permutation to form yes/no questions, but different parts of the predicate are permuted. One language may require the expression of relational meanings that are optional in the other; e.g., in English but not in Spanish much and many, little and few, on/in/at, is eating/eats and the like must be distinguished.

Grammatical materials were presented in the following way: the teacher illustrated the use of the construction using pictures or dramatizations. The children repeated the teacher's sentences, using corresponding picture cards or acting out the same parts. Then the children used the construction in new contexts. No pattern drills of the purely mechanical, repetitive, contextless kind were used. This approach involved procedures which from one point of view appear inefficient; the child may be required to learn two or more patterns almost simultaneously. In practice, however, this apparent inefficiency must be weighed against the limitations in attention span and discipline of kindergarten children and the need for providing immediate, non-artificial reinforcement. Thus in learning to use "this," the children first repeated affirmative declarative constructions using the word in a normal context or situation. They used it next in reply to the question "What is this?" Succeeding lessons included the question "Is this a ___?"

with the replies, "Yes, it is a ____" or "No, it isn't a ____." Thus, along with drill in the obligatory demonstrative, the children practiced sentence types with be and their interrogative and negative transformations.

Few of the grammar lessons can be classified as pure substitution, pure transformation, or pure addition (Lado, 1964, Ch. II). Most grammar drills involved all three. It goes without saying that no grammar explanations were used. The teaching was done entirely by pattern practice in situations contrived to permit the natural use of the constructions being drilled. Besides the basic sentence types made use of from the beginning, including transitive, intransitive and linking basic sentences and their question and imperative transformations, and the basic phrase types including determiner-adjective-noun, preposition-noun, and auxiliary-verb-adverb, the following grammatical features peculiar to English were presented specifically: Noun morphology and morphophonemics (plural and possessive only); construction of the verb phrase including the use of modal auxiliaries; have, be and the suffixes that they require; the noun determiners and demonstratives; the obligatory subject; pronoun morphology; function word constructions including prepositions; be going to and the infinitive marker to: the NP-NP sequence after verbs like give and the negative, interrogative, and imperative transformations, including the use of do, not, and the interrogative words.

The vocabulary selected for special instruction in this program consisted of about 200 words of high frequency in general English and in specific first grade reading materials (Ginn Reading Series, California State Adoption, 1960). This basic vocabulary included names of members of the family, generic terms for people, colors, numerals, terms for clothing, names of familiar animals, and verbs, adjectives, and adverbs of high frequency in the English of kindergarten children. No use was made of translation in the presentation of this material. Instead, the range of meaning of these words was presented through pictures, objects, and dramatizations. The same activities that provided minimal pair drills for phonology and pattern practice for grammar provided the setting for vocabulary presentation. Where possible, the presentation involved contrasts (big, little; run, walk; etc.). The manner of presentation resembled that used for the presentation of phonology: the teacher showed the pictures or made the dramatizations while saying the new phrases: she then repeated them, asking the children such questions as "Is this a little house?" Afterwards the children repeated the new words in appropriate phrases.

The reader is referred to Appendix A, Lessons 76, 77, 81, 85, 107, and 111 for samples of these activities.

In summary, this program attempted to adapt to the teaching of kindergarten children those aspects of a linguistic approach which were applicable to the particular needs and backgrounds of the experimental population. Based on a contrastive analysis of English and Spanish, the materials were presented orally in sentence patterns designed to permit the easy inference and automatic control of the phonological and grammatical features of English. The participants were given abundant drill in situations where the new forms were needed for communication. Almost no use was made of translation or of statements about the grammar and phonology of English.

CHAPTER III

PROCEDURE OF THE RESEARCH

Description of the Total Population

A total of 449 children enrolled in regular kindergartens in rural and suburban areas of Fresno County, California, participated in this research project. These pupils attended schools located in areas inhabited predominately by economically-deprived Mexican-Americans. These pupils attended classes in which both English-speaking and Spanish-speaking pupils were enrolled. During the conduct of this research no attempt was made to administratively group pupils on the basis of language ability. These schools are jointly administered by the Office of the Fresno County Superintendent and local Principal-Superintendents.

Of these 449 children all but four percent were born in the United States. In the majority of their homes, however, one or both parents were born in Mexico. The majority of these homes (86 percent) can be described as "in deteriorating areas with marginal housing or worse." None came from homes that could be described as "better than average." Information about the fathers' occupations obtained from individual schools shows that of 225 fathers for whom information was available, 54 percent were classified as unemployed (not retired), on relief, doing odd jobs only, or doing work receiving very low pay. Only four percent held jobs in the high-income bracket. In all but two percent of the homes Spanish is regularly spoken, although some English may also be used. While three-fourths of the children were fluent in Spanish, only half could converse in English.

Because of the migratory habits of many families whose children were enrolled in the participating classrooms, the number and nature of the population changed during the school year. This shifting of pupils is typical in classrooms of this agricultural area and was accepted in the structure of the three treatment groups used in this study. Of the 139 pupils in Treatment Group A, 103 began and ended the year in the same school, 137 of 202 in Treatment Group B, and 77 of 108 in Treatment Group C. The remaining pupils included in the population were present for at least one testing session but entered school late, left it early, or entered in the fall, left and returned in the spring. Approximately 50 more Spanish-speaking pupils enrolled in the participating classrooms for brief periods but were not present when any measurement was made.

The total population for the study included 224 boys and 225 girls ranging in chronological age from 4 years-9 months to 7 years-7 months.

Measurement Instrumentation

Measures were needed of (1) pupil intelligence, (2) ability to communicate in both Spanish and English, and (3) reading readiness.

The Goodenough-Harris Drawing Test (Harcourt, Brace & World, 1963) was selected as the measure of intelligence since it placed little emphasis on the verbal facility and is judged highly reliable for pupils of kindergarten age. It had the additional advantage of being a group test which was relatively easy to administer and score. The very simple directions were translated into Spanish and the measure administered by graduate students, native speakers of Spanish.

The Vocabulary sections of the Habilidad-General, Nivel Primario, Form CE_s (Guidance Testing Associates, Austin, Texas, 1962) and brief interviews in Spanish were used to measure pupil verbal abilities in Spanish. This test and the accompanying pre-test procedures given by the classroom teacher proved an adequate measure of Spanish speaking ability.

The most difficult verbal measurement to be obtained was that of assessing English language proficiency. It was felt by the research team that no existing test would adequately measure Spanish-speaking kindergarten pupils fluency in English. A test was therefore developed to measure pupil ability in understanding selected vocabulary items, discriminating among English phonemes and in interpreting basic sentence patterns of English speech. Two forms of this test were employed.

Form A of the Linguistic Capacity Index (Appendix B_1) required pupils to choose among pictures representing pairs of words or grammatical constructions that are contrasted in English but not in Spanish. Form A was used as a criterion variable for pupils in Treatment Group A in May, 1964, and for Treatment Groups B and C in May, 1965.

A revised test, Linguistic Capacity Index, Form B (Appendix B_2) was administered as both a control and criterion measure to Treatment Groups B and C only in October, 1964, and May, 1965.

An additional test of English phonology achievement, Phonemic Production Survey (Appendix B_3), was developed for use with the Treatment B and C populations as both a control and criterion measurement.

The Verbal Readiness section of the Metropolitan Readiness Tests, Form R (Harcourt, Brace & World, 1949) was selected as the measure of English language readiness for pupils in all three treatment groups.

Detailed analyses of these instruments as measures of linguistic ability and school readiness for pupils with Spanish home backgrounds may be found in a following section, Analysis of Test Instruments.

Measurement Procedures

Prior to the administration of group tests, classroom teachers were asked to place large play boxes on the tables to separate the pupils, to have crayons ready for marking, and to prepare a list of absent pupils. When the tester arrived, the classroom teacher took all of the English-speaking pupils who did not participate in this research project to the playground or another part of the school.

Testing was conducted by graduate students of the Fresno State College Linguistics Department. All testers were native speakers of Spanish.

Testing was conducted in the regular classroom with groups of 10 pupils in half-hour sessions. An assistant provided additional supervision.

Testers differed in their ability to handle groups of young children. All were instructed to converse briefly with the pupils in Spanish while passing out the testing materials. They were told to read or memorize the test directions and to pace themselves so that each testing period would last no more than one-half hour. One "stretch" was allowed at a convenient point in the period and pupils were cautioned not to copy each other or to talk.

Each group test was administered to all pupils within a week. Pupils who were absent for a test period were retested during the week individually or in small groups.

Most pupils considered the tests as games and seemed to have fun taking them.

In addition to data collected as test scores, the following information concerning pupils in all treatment groups was obtained from the classroom teacher through home interviews or home visits accompanied by the school nurse (Appendix $C_1, _2$):

Sex
Age
Birth place
Number of children in family
Ordinal rank
Birth place of parents
Occupation of parents
Educational level of parents
Type of housing facilities
Amounts of Spanish and English used at home
Ability to speak Spanish and English upon entering school
Number of days present in the classroom during the kindergarten year and pattern of attendance

The following information on each teacher in the experimental classrooms was also recorded:

Age
Degree held
Type of credential
Years of teaching experience
Years of kindergarten teaching experience
Marital status
Number of children at home

The following data regarding each school was recorded:

Number of children in class
Length of school day
Length of school year
Number of kindergartens in the school
Number of these involved in the study

Information collected concerning the participating communities:

Median education in community
Median income in community
Population of community
Type of community

A final rating of teacher competency by the research team was made on the basis of classroom observation with attention given the class organization and control, the extent of class participation, and the awareness of and attention paid to the individual language learning needs of Spanish-speaking pupils.

Additional measures which were exclusively employed within individual treatment groups are listed in the separate Treatment descriptions which follow.

Research Populations

Treatment Group A

Population. For Treatment Group A, 139 pupils comprised the original population. Transfers and non-attendance reduced the population to 103 kindergarteners. These pupils were enrolled in classes in the Wilson, Jefferson, Lone Star, and Malaga Schools of Fresno County, September, 1963-May, 1964.

Instructional Procedures. Treatment Group A had no formal English instruction during the kindergarten year. The pupils participated in the traditional kindergarten activities of dramatic play, music and rhythms, arts and crafts, organized games, discussions and experiments in science and social studies, free play, and language activities including story telling and "show and tell." The pupils in each class who had little or no initial knowledge of English learned the language through interaction with other pupils and with the teacher. Each teacher named many objects and used pictures extensively. The pupils in the Wilson School were given additional help by a speech therapist who worked with a few pupils each week outside the classroom.

Measurement. The Treatment Group A population of 103 pupils was measured in May, 1964, with the following tests:

- Habilidad-General, Nivel Primario
- Metropolitan Readiness Tests, Form R (Verbal Readiness Section)
- Linguistic Capacity Index, Form A

Description and content analysis of these measures will be found in the section, Analysis of Test Instruments.

Treatment Group B

Population. The 202 pupils from Spanish-speaking environments who enrolled in the kindergarten classes of the same Fresno County schools in the fall of 1964 comprised Treatment Group B. All of the pupils in Groups A and B were, therefore, from the same geographic area; in fact, many were from the same families. Pupils from both treatment groups were taught by the same teachers in the Wilson, Lone Star, and Malaga Schools; and both treatment groups in all schools utilized the same classrooms, basic curriculum and general school environment.

Instructional Procedures. ✓A structured linguistically-oriented English language program was prepared for implementation in the classrooms for Treatment Group B. The course of study for this program (Saville, 1964) was divided into six units, each with twenty daily lessons and five days of evaluation and review. Samples of these lessons from each of the six units may be found in Appendix A. The first three units of this language program promoted the discrimination of English phonemes. First, the consonant sounds were presented and contrasted in their order of difficulty for the students. All of the sounds which are phonemic in English and not in Spanish were included in the teaching materials. The substitutions of /w/ for [hw] and /ǰ/ for /ž/ were not considered significant because many native speakers of English make the same replacements.

The consonant phonemes were presented in Units I and II, Lessons 1-40. Lessons 41-45 in Unit III introduced consonant clusters containing /s/ and /š/ in initial and final word positions. Lessons 46-60 in Unit III presented and contrasted the vowel sounds contrastive in English in combinations most difficult for Spanish-speaking pupils to discriminate.

Phonemic discrimination and speech habits were developed in the language lessons through exercises, games, stories, songs, and poems. Each lesson contained activities which required responses by the entire class, small groups, and individuals. Particular emphasis was placed on eliciting a large number of individual responses to provide the pupils who needed help in recognizing and producing English phonemes an opportunity for frequent correction and practice. The ordering of activities in the first three units assumed the pupils could first imitate sequences of phonemes produced by the teacher, then isolate and discriminate among phonemes in such contrastive sequences as /čuw/ and /šuw/, and finally produce the same and similar sequences with consistent choices of correct English phonemes.

An example of an activity requiring the pupils to imitate the teacher is the "Echo Game" (Appendix A, Lesson 6, No. 1), which has the children repeat the names of several pictures that contain /š/ in initial, medial, and final word positions.

An activity requiring pupils to isolate and discriminate phonemes is the game of "Bob and Virginia" (Appendix A, Lesson 4, No. 2). The teacher puts pictures on the flannel board of both Bob and Virginia and prepares additional pictures of objects containing /b/ or /v/. Children place under Bob all pictures containing /b/ and under Virginia all with /v/. A similar activity uses a pocket chart (Appendix A, Lesson 5, No. 5). The chart has two pockets with pictures of "mitt" and "meat" pasted on them and several 3" x 6" flash cards with pictures containing /i/ and /iy/. The children sort the flash cards into the appropriate pockets.

An activity requiring pupils to produce contrastive phonemes is the game "New Shoes" (Appendix A, Lesson 8, No. 5). Small shoes are cut from colored paper and put in a box. One child closes his eyes and chooses a shoe while the class chants, "New shoes, new shoes, which color do you choose?" The child guesses, "I choose _____ shoes." If he's correct, he gets another turn.

All pupils, both English and Spanish-speaking, in each of the Treatment Group B experimental classrooms participated in all the activities of the first three units. It was felt that the Spanish-speaking pupils would learn from their English-speaking peers as they worked and played, that the two groups of pupils would be more likely to interact freely if they shared the activities of the language lessons and no separation was made in the class early in the year, and that pupils who were slow to respond to the lessons would be more likely to participate as part of the whole class.

After the phonemes of English were presented, lessons for the Spanish-speaking pupils only were organized around the sequential presentation of English sentence structures. The first lesson in Unit IV presented a simple noun phrase and subsequent lessons increased the range of sentence structures through expansion and transformation. A complete listing of the structures can be found in the Table of Contents for Units IV, V, and VI, Appendix A. Vocabulary items were taught within these structural contexts. All of the sentence patterns presented in Units IV through VI were taught through functional drill utilizing pattern practices in the form of games, songs, stories, and poems. Examples of these activities will be found in Appendix A, Lessons 76, 77, 81, 85, 107, and 111.

The pupils who were not able to converse in English were given from ten to twenty minutes a day of separate formal language instruction followed by ten minutes daily for the entire class. Each lesson provided activities for the Spanish-speaking group, and then one or two activities using a wider vocabulary range in the same structures for the entire class.

The separate language instruction emphasized pattern drills and gave each pupil a maximum opportunity to repeat sentence patterns in such activities as describing pictures or objects in a box (Appendix A, Lesson 77, No. 1), guessing games (Lesson 81, No. 4), manipulating and describing objects on a flannel board (Lesson 85, Nos. 4, 5, and 6), acting out verbs (Lesson 107, Nos. 1, 2, and 3), and giving and following directions (Lesson 111, No. 3). Activities for the entire group utilized the sentence pattern emphasized in the lesson in such enlarged contexts as stories (Lesson 85, No. 8), games (Lesson 107, No. 4), and directed coloring (Lesson 111, No. 4).

A basic vocabulary of 176 words was presented within the sentence patterns of Units IV through VI. The words introduced in each sentence frame can also be found in the Table of Contents for Units IV, V, and VI, Appendix A.

References were made in each lesson to the appropriate visual aids. These included pictures for flannel board stories, puppets, and varied games. Pocket charts were constructed for sorting pictures containing contrastive phonemes. Each vocabulary item was pictured on one large flash card and smaller flash cards for individual pupils to use in independent drill. Patterns for all pictures along with directions for preparing them were found at the end of each unit. The List of Illustrations for Unit I and patterns for the pictures called for in Lesson 4 are included in Appendix A.

A systematic and detailed recording and analysis of pupil growth in language abilities was made (Appendix D), and a conscientious attempt was made to overcome pupil phonological and grammatical weaknesses at specific points of English language development.

Measurement. The following measures were administered to the kindergarten pupils comprising Treatment Group B:

January, 1965

- Habilidad-General, Novel Primario (Form CE_s)
  Group administration
- Habilidad-General, Novel Primario (Form CE_s)
  Randomly selected individual administration
- Linguistic Capacity Index (Form B)
- Goodenough-Harris Drawing Test
- Phonemic Production Survey

May, 1965

- Habilidad-General, Novel Primario (Form CE_s)
- Linguistic Capacity Index (Form A)
- Linguistic Capacity Index (Form B)
- Phonemic Production Survey
- Metropolitan Reading Readiness Test (Form R)

- Informal Unit Tests, as appropriate (Appendix D_2)

The January, 1965, measures were intended as control measures of intelligence and verbal facility in both English and Spanish. As noted above, the Habilidad was given individually to selected pupils to investigate the degree to which attention span and relative inability to follow directions in group situations affected scores on this measure.

The May, 1965, testing was accomplished to evaluate pupil language achievements following one year of the experimental program.

The Habilidad-General was readministered at the close of the experimental year to indicate the degree to which additional classroom instruction would affect group test scores of kindergarten Spanish-speaking pupils.

Treatment Group C

Population. The original research proposal submitted to the Cooperative Research Branch of the United States Office of Education did not include provisions for the inclusion of a third treatment group.

The preliminary research work (1963-1964) on this project was accomplished in those kindergarten classrooms of the Clovis, California, Unified School District where a significant number of Spanish-speaking pupils were enrolled. It was felt by the principal investigators that since no control measures had been administered before or criterion measures following the preliminary research procedures, it would be inappropriate to include the Clovis 1963-1964 kindergarten population as part of the proposed control group Treatment A. Further, many of the Clovis kindergarten teachers were experienced in the linguistically-oriented classroom procedures and thus, the May, 1964 testing of those classrooms would not reflect a traditional kindergarten language program.

It was felt by the research teams, however, that the language measurement of the 1964-1965 Clovis kindergarten classrooms would not adversely affect the research design nor violate the objectives of the investigation. Further, it was felt that an additional population would add significantly to the evaluation of the instructional procedures of the research.

The description of the instructional procedures and measurement of this Treatment C population is included in this final report as an additional population of 108 pupils on which, it is felt, valuable information should be reported.

Instructional Procedures. The exact instructional procedures ✓ employed by the classroom teachers of Treatment Group B were similarly employed by teachers of the Group C population.

Measurement. The same control and criterion measures as specified for Treatment Group B were administered at the same time to Treatment Group C pupils.

Research Project 2821, In-Service Program

The four classroom teachers of Treatment Group B and the five teachers of Treatment Group C were instructed in the use of the proposed language teaching methods through three procedures: training workshops, demonstration teaching, and supervision.

Before school opened in September, 1964, a two-day orientation workshop for all participating personnel was conducted by the Departments of Linguistics and Elementary Education of Fresno State College. The purpose of the workshop was to outline the procedures of the study, to provide some linguistic theory relevant to the study (including an explanation of the contrastive phonemic systems of English and Spanish), and to demonstrate instructional materials and methods to be used during the first semester. A portion of the workshop time was devoted to the discussion of class organization (Appendix E_1) and scheduling (Appendix E_2) and in completing the first instructional aids to be used in the language lessons.

Prior to the initial workshop all pictures to be used in the lessons had been transferred to flannel, tagboard, or colored construction paper; and all other necessary material collected and organized for the teachers (such as small farm animals, spools of colored thread, and yarn). Coloring and cutting the pictures and assembling puppets and charts for use required an average of four additional hours for each of the first three units. The portion of this time which was spent as teacher group activity served at least two other purposes. First, the teachers and other project personnel had a chance to get acquainted informally; and second, there was frequent opportunity for additional explanation on the use of specific materials as they were constructed.

A second workshop was held in January, 1965, to distribute and explain the instructional materials to be used during the second half of the year and to present additional linguistic theory relevant to the teaching of English vocabulary and syntax. The participating teachers were given lists of contrasted grammatical structures in English and Spanish and briefly introduced to such concepts as "slots in structure," "word order," and "inflection." The range of material to be presented during the spring semester was described and methods of using the varied pattern drills prescribed in the last three units were demonstrated. Because the final units called for a change from "whole class" instruction to teaching a smaller group within the class, specific grouping and scheduling techniques were outlined. Far less teacher preparation of materials was required for the second half of the language program, and no group work time was allotted for it. All pictures to be used in the lessons had again been transferred to appropriate material; flash cards and work papers duplicated for all pupils; and felt pens, plastic picture holders, and other necessary materials obtained for each teacher.

Supervisory Assistance: Another procedure used to instruct the teachers was demonstration teaching. The research assistant for the project, an experienced kindergarten teacher, visited each classroom during the first two weeks of school. During this time she played games and participated in other activities to get acquainted with the pupils and their teachers. When the language lessons began with the third week of school, the research assistant taught a lesson in each of the sixteen experimental classes once a week. Each classroom teacher observed the techniques used by the assistant and the responses of her own pupils. Time was made available after each demonstration for the two teachers to discuss the language teaching methods, the pupils participating in the study, and the problems encountered.

There were many problems and questions early in the year concerning class scheduling, methods of presenting some of the activities, group control, and individual discipline problems (usually English-speaking children who demanded so much of the teachers' attention that they could not conduct a group lesson effectively).

Suggested daily schedules had been distributed with the instructional materials in the introductory workshop, but these had to be adjusted to fit each class and teacher. One teacher spaced the language activities through the day with two after roll call, one just before recess, and so forth. Two teachers scheduled the language period late in the day and reported that their classes grew restless. In these cases, moving the language lesson to an earlier time proved quite helpful.

Several of the participating teachers had never taught a "formal" lesson to a group of kindergarten pupils. Their initial problems usually disappeared when they learned what they could expect of their pupils and were consistent in these expectations with regard to group behavior. The most successful teachers had their pupils come a few at a time to a designated area of the room until all had gathered. Some classes used chairs, some the floor, and some a combination of the two. These teachers were calmly insistent that the children be polite to each other. In a few classes children came running to the language group, shoved for positions near the teacher, and occasionally pinched or hit each other. These groups apparently had a lot of fun with the early language activities, but it soon became evident that a few children (usually those needing the language practice the most) did not participate at all when the teacher did not insist that the more forward children take turns with the shyer ones in the language activities.

The research assistant suggested or demonstrated possible solutions to varied problems or shared methods being used successfully by another teacher in a similar situation.

Most problems were easy to solve. Children who liked to pinch others could not when holding charts or pictures; shy children would let puppets talk for them. Some problems could not be solved, like the erratic attendance patterns and poor living conditions of many of the children.

After the first ten weeks of formal language instruction, the scheduled demonstrations were reduced to one or two a month except in cases where the classroom teacher requested them oftener or needed more assistance with her teaching techniques.

The principal investigators of the project visited each class weekly to encourage and make suggestions to the teachers and to evaluate the effectiveness of the teachers and the language methods.

Regional In-Service Program

A conference was held in November, 1964, for 100 teachers, supervisors, and administrators in the Fresno State College service area to explain the methods and materials being used in this language program. Dr. Thomas D. Horn, Director of USOE Research Project 2648 being conducted through the University of Texas, discussed the methods and materials being used in Texas to teach English to Spanish-speaking pupils. This conference was sponsored jointly by the Departments of Linguistics and Elementary Education of Fresno State College.

Three special workshops were offered in May, 1965, through the Extension Division of Fresno State College in the San Joaquin Valley cities of Bakersfield, Visalia, and Fresno. In these workshops the methods and materials implemented in this language instruction program were explained. Procedures for testing the pupils' language capacity were presented and methods for teaching English phonology, syntax, and vocabulary explained and demonstrated. Detailed instructional materials used in the study were made available to the 500 educators who enrolled in the workshops.

Many requests for assistance were received from teachers and administrators of classes not participating in the study. Advice was given whenever requested, copies of the instructional materials distributed to many for use with pupils ranging in age from pre-schoolers in

Operation Headstart projects to adults attending night classes, and resource lists of materials currently available for teaching English as a second language were compiled and distributed to requesting school districts throughout the nation.

CHAPTER IV

THE MEASUREMENT INSTRUMENTS

Because of the unique nature of the research population, Spanish language-oriented kindergarten pupils, and the primary objective of the research, the teaching of English as a second language through formal classroom instruction, the selection of test instruments constituted a problem of major consequence.

This section is included as a report of testing experience based on classroom examination of 439 kindergarten pupils.

Except for the Habilidad-General the standardized instruments employed in Project 2821 evaluations were normed on typical populations. The major conclusions to be drawn from this section are:

- An appreciation of the difficulties of designing achievement and diagnostic tests for atypical populations.
- The difficulties encountered in group testing of pre-first grade pupils.
- The caution which must be exercised in drawing conclusions on the school achievements of an atypical population whose English language abilities are difficult to ascertain employing measurement instruments whose validity, reliability, and appropriateness for such pupils are tenuous and inferential at best.

The following measurements seemed most compatible with the objectives of the research effort.

Control Variable Program

1. Estimate of intelligence employing a culture-free measure.

   Selected instrument: Goodenough-Harris Drawing Test
   Administration: Treatment Group A - May, 1964
   Treatment Group B - January, 1965
   Treatment Group C - January, 1965

2. Estimate of intelligence employing a Spanish verbal measure.

   Selected instrument: Habilidad-General, Novel Primario
   Administration: Treatment Group A - May, 1964
   Treatment Group B - January, 1965
   Treatment Group C - January, 1965
   Randomly Selected Population - February, 1965

3. Measurement of the English language abilities of kindergarten pupils.

   Selected Instruments: Linguistic Capacity Index, Form A
   Linguistic Capacity Index, Form B
   Phonemic Production Survey
   Administration: Treatment Group A - May, 1964
   - Linguistic Capacity Index, Form A

   Treatment Group B - January, 1965
   - Linguistic Capacity Index, Form B
   - Phonemic Production Survey

   Treatment Group C - January, 1965
   - Linguistic Capacity Index, Form B
   - Phonemic Production Survey

Criterion Variable Program

1. Measurement of the English language abilities of entering Grade 1 pupils.

   Selected instruments: Linguistic Capacity Index, Form A
   Linguistic Capacity Index, Form B
   Phonemic Production Survey
   Administration: Treatment Group A - May, 1964
   - Linguistic Capacity Index, Form A

   Treatment Group B - May, 1965
   - Linguistic Capacity Index, Form A
   - Linguistic Capacity Index, Form B
   - Phonemic Production Survey

   Treatment Group C - May, 1965
   - Linguistic Capacity Index, Form A
   - Linguistic Capacity Index, Form B
   - Phonemic Production Survey

2. Measurement of accepted readiness abilities related to success in first grade.

Selected instrument: Metropolitan Readiness Tests, Form R
Administration: Treatment Group A - May, 1964
Treatment Group B - May, 1965
Treatment Group C - May, 1965

Instrumentation

Goodenough-Harris Drawing Test (Harcourt, Brace and World, 1963)

Description: The selection of an appropriate intelligence test for Spanish language-oriented pupils attending English-oriented public schools required use of a culture-free, non-verbal measure.

Directions for the selected measure are extremely simple, requiring the pupil to draw a man, a woman, and a self picture.

The Goodenough-Harris yields both a quantitative score (parts of the human body depicted) and a qualitative score (completeness of the physiology depicted). A 73-point scale for the man drawing, a 71-point scale for the woman drawing, and a 73-point scale for the self picture total a score convertible to an intelligence quotient.

Basis for Selection: This test was selected for its simplicity of directions, ease of grouping pupils for valid administration, strictness in correction procedures, and refreshing simplicity of interpretation.

Evaluation: This measure is highly recommended for use in estimating the intelligence of atypical populations of young children. For this research project the very simple directions were translated into Spanish with successful results. No difficulties whatever were encountered in the administration of this test.

The validity of the measure, however, is dependent on the objectivity and experience of the correction personnel. For this research project, graduate students in psychology were used. Qualitative scales afford the best opportunity for evaluating behavioral science research investigations. The difficulties of designing and scoring such scales are too obvious for elaboration.

Until such time as qualitative measurements are subject to more rigorous statistical controls, the reported scores should be accepted as the best obtainable with existing measurement instruments.

Habilidad-General, Nivel Primario

Description: The test measures pupil abilities in vocabulary, number, association, and classification. The directions are given in Spanish.

Vocabulary Section:	4 practice items, 25 test items, untimed
Number Section:	15 test items, untimed
Association:	8 practice items, 20 test items, 4 minutes
Classification:	8 practice items, 20 test items, 4 minutes

In addition, a pre-test pupil practice booklet of 15 items is available for classroom use.

Basis for Selection: It was felt by the research team that a verbal measure of intelligence would be desirable. The range of language abilities of the population, however, precluded use of intelligence measures employing English directions. It was further concluded that a translated version of any existing standardized test would probably invalidate obtained scores.

The selected test had extensive field trials in Texas and norms were available. The directions seemed simple and the test booklet appeared large enough for kindergarten use. Further, native Spanish-speaking graduate students were available for test administration.

Evaluation: The pre-test was used by classroom teachers on the day preceding the actual testing. No difficulties were reported by these teachers.

It was planned to give the measure in two sittings. This plan, however, was overly optimistic. Difficulties of pupils in holding their place, turning pages, and persistence in concluding the test items required a four-sitting administration. It was decided to eliminate the number section after additional difficulties in procedure.

The Habilidad-General was a difficult test to administer to the pupils of these groups who often marked items indiscriminately and lost interest.

As a check on the degree to which pupil short attention span and relative inability to follow group directions affected scores obtained on the Habilidad, one Treatment Group B and C pupil in every five was retested individually in February. The same form of this test was re-administered in May, 1965, to estimate the effectiveness of kindergarten group instruction on group test scores.

Some of the pupils' difficulty with this particular test may have been due to the early test administration (January - Treatment B and C), the large number and small size of the pictures, or to the choice of some vocabulary items not used by Spanish-speaking families in the San Joaquin Valley of California.

Linguistic Capacity Index, Form A (Appendix B_1)

Description: The Index is based on a contrastive analysis of English and Spanish grammar and phonology. It is intended for use with primary grade pupils whose native language is Spanish. The Index may be used to assess pupil achievement in learning English as a foreign language and also as a diagnostic instrument to assist the classroom teacher in grouping pupils for more effective instruction.

Considerable attention was given to the desirability of using Spanish only for the preliminary directions. The wide range of Spanish language abilities from occasional to total dependence, however, indicated that Spanish directions might not prove more advantageous than using English directions throughout the entire test. It was further concluded that since the purpose of the Index was to measure English language proficiency, the directions themselves would, in effect, constitute a measurement of sorts. English directions were therefore used.

There are three sections to the test: vocabulary recognition, contrastive phonology, and contrastive grammar. Directions require the pupil(s) to choose among pictures representing pairs of words or grammatical constructions that are contrasted in English but not in Spanish.

The vocabulary section of Form A contained 25 items measuring recognition of noun, verb, and adjective form. The 20 items of the contrastive phonology section measure the pupils ability to distinguish pairs of sounds which are contrasted in English but not in Spanish.

The contrastive grammar section of Form A contained 17 items which measured the pupils' understanding of English function words, word order, and inflectional constructions which do not correspond to semantically similar constructions in Spanish.

Basis for Selection: A thorough review of available standardized tests to measure pupil achievements in learning English was made. While many reading achievement and readiness tests were available, no measures of specific and essential linguistic abilities in learning English were found. It was decided to design and evaluate such an instrument.

Evaluation: Form A of the Index proved to be deficient in both directions and format. Since only the authors knew the specific directions, only they could administer the test, a situation not conducive to normal response by kindergarten pupils of a different culture.

The art work, likewise, was overly simple, tending toward vagueness, and the $8\frac{1}{2}$" x 11" sheets, with but two items to the page, were obviously too bulky for transport and classroom use.

The most serious deficiency, however, was that the test contained no visual clues or markers to assist pupils in holding their place. Haphazard markings and pupil coloring attended the early classroom administrations in field trials. For valid and reliable measurement, it was concluded that a revised instrument was needed.

Linguistic Capacity Index, Form B (Appendix B_2)

Description: Form B of the Index differed in several major ways from the earlier Form A:

- The vocabulary section contained 20 items rather than 25 and combined elements of both English vocabulary recognition and syntax knowledge.
- The syntax section contained 20 items instead of the earlier 17.
- A pre-test exercise for the pupils was developed, and a set of revised stimulus cards were employed to assist pupils in holding their place.
- The art work and general test format were improved.
- A set of directions for classroom teachers was written.

Evaluation: The newer Form B of the Index proved in both field trials and experimental use to be vastly superior to the older form.

The measure was administered without difficulty to over 300 kindergarten pupils of Treatment Groups B and C of USOE 2821 and to over 2400 grade one pupils participating in the Cooperative Research First Grade Reading Projects 2648 and 2734.

Several improvements still appear essential. Items 17, 18, 19 of the vocabulary section are still confusing. In 17, drawing circles around all the dogs still satisfies the direction "draw a circle around some dogs." The same alternatives apply to 18 and 19.

Items 5, 9, 10, 17, 20 of the contrastive phonology section cause some confusion because of the difficulty in depicting the word containing the correct phoneme.

The Linguistic Capacity Index was subject to statistical analysis with existing standardized and informal measures.

Table I indicates the mean scores attained by pupils of varying English language abilities on certain selected measurement instruments.

Mean Scores, Language Categories

Category:

1. **Little or no facility in English**
2. **Able to understand simple directions, but not able to carry on a conversation**
3. **Able to carry on a conversation in English**

	Category			Total population	
	1 n=41	2 n=58	3 n=68	n=167	
-Linguistic Capacity Index B	12.24	14.47	15.93	14.51	**Mean**
Vocabulary Section (20 items)	3.282	3.180	1.897	3.114	**S.D.**
-Linguistic Capacity Index B	9.65	12.28	14.16	12.40	**Mean**
Phonology Section (20 items)	2.692	2.784	2.444	3.164	**S.D.**
-Linguistic Capacity Index B	12.61	14.98	17.47	15.51	**Mean**
Syntax Section (20 items)	3.027	3.203	2.076	3.359	**S.D.**
-Linguistic Capacity Index B	34.54	41.84	47.56	42.38	**Mean**
Total Score (60 items)	7.840	7.766	4.714	8.438	**S.D.**
-Phonetic Production Survey	40.41	45.72	53.24	47.48	**Mean**
Vocabulary Section (60 items)	11.33	8.896	5.355	9.874	**S.D.**
-Phonetic Production Survey	104.83	103.64	108.00	105.71	**Mean**
Total (121 items)	10.319	12.113	7.338	10.141	**S.D.**
-Metropolitan Readiness Tests R	10.20	12.38	14.31	12.63	**Mean**
Word Section (19 items)	2.990	3.106	2.225	3.191	**S.D.**
-Metropolitan Readiness Tests R	29.76	38.97	47.69	40.26	**Mean**
Total Score, Sections 1-4 (66 items)	10.73	11.188	10.158	12.803	**S.D.**

Table I indicates a regular and expected pattern of mean scores with Category 1 scoring lowest on all variables except total score on the Phonetic Production Survey, a test anomaly to be explained in the analysis of the Phonetic Production Survey.

Table II shows the correlations obtained (for English Usage categories 1, 2, 3) between the Linguistic Capacity Index (Form B) Vocabulary Section and the Metropolitan Readiness Tests Word Section.

Correlations, LCI-MRT

All Categories
n = 167
$Y' = .64883X + 3.21090$
$r = .63314$
Std. error $y.x = 2.48523$

English Usage 1
n = 41
$Y' = .45531X + 4.62030$
$r = .49981$
Std. error $y.x = 2.65493$

English Usage 2
n = 58
$Y' = .61517X + 3.4807$
$r = .62972$
Std. error $y.x = 2.45576$

English Usage 3
n = 68
$Y' = .41100X + 7.76299$
$r = .35042$
Std. error $y.x = 2.11484$

The Vocabulary Section of the Linguistic Capacity Index has a rather high positive correlation with the Metropolitan Readiness Tests Word Section.

Table III shows the correlations obtained between the Linguistic Capacity Index (Form B) Vocabulary Section and the Phonetic Production Survey Vocabulary Section for English Usage categories 1, 2, 3.

Correlations, LCI Vocabulary - PPS Vocabulary

All Categories $n = 167$	$Y' = 1.77056X + 21.77931$ $r = .55844$ Std. error $y.x = 8.24034$
English Usage 1 $n = 41$	$Y' = 1.72989X + 19.23397$ $r = .50102$ Std. error $y.x = 10.05442$
English Usage 2 $n = 58$	$Y' = 1.23364X + 27.87882$ $r = .44097$ Std. error $y.x = 8.12525$
English Usage 3 $n = 68$	$Y' = .67520X + 42.48169$ $r = .23913$ Std. error $y.x = 5.27818$

Lower but still positive correlations were obtained between the Vocabulary Sections of the Linguistic Capacity Index and the Phonetic Production Survey.

Table IV shows the correlations obtained for English Usage categories 1, 2, 3 between the Linguistic Capacity Index (Form B) Phonology Section and the Phonetic Production Survey.

Correlations, LCI Phonology - PPS Phonology

All Categories $n = 167$	$Y' = .32931X + 101.62264$ $r = .10275$ Std. error $y.x = 10.14839$
English Usage 1 $n = 41$	$Y' = .00131X + 104.84193$ $r = .00034$ Std. error $y.x = 10.58034$
English Usage 2 $n = 58$	$Y' = .00935X + 103.75277$ $r = -.00215$ Std. error $y.x = 12.32691$
English Usage 3 $n = 68$	$Y' = .41212X + 102.16365$ $r = .13709$ Std. error $y.x = 7.37848$

The low correlations obtained between the Phonology Section of the LCI and the Phonetic Production Survey indicate that all pupils score high on the Phonetic Production Survey regardless of usage category. Since the PPS total score includes a correct score for ability to mimic phonemes, such high scores are to be expected.

Table V illustrates the correlations obtained between the Linguistic Capacity Index (Form B) Syntax Section and the Metropolitan Readiness Tests, Sections 1-4 for English Usage categories 1, 2, 3.

Correlations, LCI Syntax - MRT

All Categories $n = 167$	$Y' = 2.82157X - 3.23197$ $r = .74029$ Std. error $y.x = 8.65952$
English Usage 1 $n = 41$	$Y' = 2.35285X - .08722$ $r = .66360$ Std. error $y.x = 8.23284$
English Usage 2 $n = 58$	$Y' = 2.52102X + 1.19363$ $r = .72171$ Std. error $y.x = 7.88135$
English Usage 3 $n = 68$	$Y' = 2.23212X + 8.69464$ $r = .45608$ Std. error $y.x = 9.17586$

The high positive correlations shown in Table V indicate that pupils who understand English can follow the directions for the Metropolitan Readiness Tests. This correlation implies that the Syntax Section of the LCI is a valid diagnostic instrument for assessing English language ability, and that the Metropolitan Readiness Tests are acceptable achievement measures of general knowledge of English, though not of the specific syntactic or phonological constructions emphasized in this research.

Table VI indicates the correlations obtained between the Linguistic Capacity Total Score and the Metropolitan Readiness Tests, Section 1-4 for English Usage categories 1, 2, 3.

Correlations, LCI-MRT

All Categories n = 167	Y' = 1.16100X - 8.94267 r = .76517 Std. error = 8.29288
English Usage 1 n = 41	Y' = 1.01474X - 5.28986 r = .74120 Std. error y.x = 7.38757
English Usage 2 n = 58	Y' = 1.05977X - 5.38070 r = .73558 Std. error y.x = 7.71323
English Usage 3 n = 68	Y' = .99733X + .25921 r = .46278 Std. error y.x = 9.14015

Table VI indicates a high positive correlation between the two measures which were used as criterion variables in this study.

The correlations shown in Tables II-VI indicate the usefulness of the Linguistic Capacity Index as a measure of learning readiness for Spanish-speaking pupils in English schools.

A major advantage of the Linguistic Capacity Index, however, is its usefulness in diagnosing specific English language deficiencies of Spanish language-oriented pupils. The overall effectiveness of the instrument as an aid to improving oral language skills is conditioned by the thoroughness of the classroom teacher in observing and recording specific language errors as revealed by the testing.

Metropolitan Readiness Test (Form R)

Description: This test is designed for end of kindergarten and beginning first grade pupils. Four scores may be obtained:

- Reading readiness
- Number readiness
- Drawing a man
- Total score

Only the reading-readiness sections were administered as a criterion variable to the three treatment groups. These readiness scores represent a sum of scores obtained on word meaning, sentences, information, and matching.

Basis for Selection: This test was selected because of its widespread acceptance as a measure of school readiness. Since the language sections on word meaning, sentences, and information require knowledge of both vocabulary and syntax, it was felt that the test would, in effect, measure certain English language proficiencies essential for Grade I success.

It was realized that this measure, through no fault of design, would not estimate certain hypothesized outcomes of the research design: although Test One, Word Meaning, and Test Two, Sentences, do, in fact, measure linguistic ability. Test Three, Information, involves the interpretation of spoken English sentences although certain items are culturally weighted. It was felt that Test Four would yield little information on pupil linguistic ability.

The following disadvantages of the measure are listed here to alert prospective users of the need for additional language testing in contemplated research efforts as was accomplished through the use of the Linguistic Capacity Index and the Phonemic Production Survey in the project under discussion here.

Test One of the Metropolitan Readiness Tests (Form R) measures the child's knowledge of 19 vocabulary items. Several of these words, however, involve cultural as well as linguistic knowledge (pigeon, hatchet, trunk, parrot, moccasin, kennel). With the possible exceptions of test item 7, "dress" or "dresser," no words in Test One measure the child's ability to distinguish English phonemes, a major objective of the research, since none of the pictures have sufficiently similar names that failure to distinguish individual phonemes could lead to misunderstanding.

Test Two measures vocabulary, cultural information, and grammar. Vocabulary items required include the relatively obscure words and phrases "May basket," "jack-o'-lantern," "pencil case," "harness," "wander," "two-story," "notice" (noun). Cultural information tested includes knowing that you can get a pail of water from a well; that hay is stored in a barn, not on a wagon; that a man hands you boxes from a shelf at a grocery store; and the like. Some grammatical principles are tested rather efficiently: tense in Nos. 1, 3, 5; a noun determiner in No. 12. (Item 11 appears to have the wrong tense; it should read

"The man is reading...." Item 6 might be confusing for the same reason). No other grammatical principles are tested specifically; i.e., misunderstanding of the grammar of the sentence would probably not lead to an incorrect response if the child knows the content word vocabulary and has a middle class American cultural background. Without those affecting environmental factors, it would be impossible to tell whether that supposed cultural disadvantage or faulty grammar would occasion error.

A newer form of the test, Metropolitan Readiness Test Form A, 1964, was likewise analyzed for possible use as a criterion measure. As with the older form, Tests 3, 4, 5, and 6, and "Drawing a Man" do not appear to measure linguistic ability except insofar as this ability is related to maturity and intelligence.

Test One, "Word Meaning," is a measure of the child's control of the vocabulary of general American culture. It also tests the child's knowledge of the vocabulary of certain regions and social classes. For example, blueberry and toboggan are northern and eastern cultural (and, therefore, lexical) items; distinguishing umpire from catcher and crocheting from knitting presupposes familiarity with, if not membership in, a certain social class.

Two items in Test One, Nos. 2 and 16, appear to measure a child's ability to distinguish sounds. Number 2 requires hearing the difference between globe, stove, and gloves; and number 16 requires distinguishing hoop from hoof. The latter is the only one in the test which measures sound mastery with any accuracy, and these words are a minimal pair only in dialects in which they have the same vowel.

Test Two, "Listening," is a test of vocabulary, attentiveness, cultural information, and, indirectly, of grammar. An understanding of English grammar is involved in every problem, but not independently except perhaps in item 2, where there may be a contrast between rakes and has raked. The practice of shifting from past to present - timeless tense (items 2 and 3 compared with 4 and 8) - when the pictures seem better described in present progressive tense seems to make this part of the test a very inaccurate measure of a child's control of English grammar.

Though some apprehension existed relative to the appropriativeness of the Metropolitan Readiness instruments, it was felt that the earlier time tested Form R was the best available standardized criterion variable for use with this population.

The factors favoring this selection were: the widespread acceptance of this instrument as a measure of Grade 1 learning readiness, the relative ease of administration, teacher familiarity with the instrument, and the existence of supplementary norms for Spanish-speaking pupils (Test Data Report #9, Harcourt, Brace & World, 1961).

Evaluation: Little difficulty was experienced in using this instrument. The fact that it was the last test administered to the treatment groups following measures employing similar procedures contributed, no doubt, to this circumstance.

Phonemic Production Survey (Appendix B3)

Description: The Phonemic Production Survey was developed to measure the pupil's ability to produce the phonemes of English by responding to a picture or by imitating the tester. The examiner showed each pupil a series of sixty pictures and recorded the responses which did not "sound English." If the pupil did not know the vocabulary item shown, the tester pronounced the word and recorded the pupil's attempt to imitate the production of phonemes. Separate scores were recorded for each pupil's ability to produce the phonemes without stimulation and for his total production capacity including imitation. Single phonemes occurring in initial, medial, and final positions in different contexts were scored separately as were vowels occurring before voiced consonants, voiceless consonants, /r/, and in the final position in different words.

The sixty items allowed the possible production of 66 consonant phonemes, 24 consonant clusters, and 31 vowels for a total possible score of 121. One point was given for each item produced correctly, either unstimulated or stimulated; and a record kept of the frequency and distribution of errors.

The examiners were graduate students in linguistics trained in phonemic transcription.

Basis for Selection: It was felt by the research team that a detailed inventory of phonemic production ability was essential for evaluating pupil progress following instruction in Units I-III of the Teacher's Guide, USOE 2821. The Phonemic Production Survey was also used to diagnose specific weaknesses in sound production for the purpose of providing additional, intensive instruction.

Evaluation: The Phonemic Production Survey proved to be an excellent diagnostic instrument and an invaluable aid to individualizing language instruction.

As an achievement measure separate scores for unstimulated (pupil responds to the picture) and stimulated (pupil responds to the examiner's pronunciation) items were recorded. It would be possible, for example, for a pupil skilled in mimicry to fail in producing any vocabulary item in English, yet successrully respond to the examiner's cue. Such a pupil would score higher on this measure than a pupil responding correctly to each vocabulary item, such responses containing some phonemic inaccuracies; since in the latter case the examiner would not cue for a stimulated response.

CHAPTER V

ANALYSIS OF THE DATA

It was the purpose of this study to design, implement, supervise and evaluate an oral language development program to improve the English speaking ability of kindergarten pupils whose primary language was Spanish.

There were three treatment groups employed in the conduct of this study.

Treatment Group A	comprised of 138 kindergarten pupils of Spanish home language background instructed by traditional procedures during the 1963-1964 year.
Treatment Group B	comprised of 196 kindergarten pupils of Spanish home language background instructed during the 1964-1965 year by the same Group A classroom teachers. The instructional program employed emphasized linguistic principles in the teaching of English phonology, vocabulary and grammar.
Treatment Group C	comprised of 104 kindergarten pupils of Spanish home language background taught by five classroom teachers with an additional year of experience in the instructional procedures employed in Treatment Group B.

Descriptive Analysis

Description of Participating Schools

Eight elementary schools participated in this research. For the two years of the study, 1963-64, 1964-65, data were collected from a total of 21 classrooms: 4 classrooms in Treatment Group A, 8 classrooms in Treatment Group B and 9 classrooms in Treatment Group C. These classrooms in Treatments B and C represent half-day sessions. For Treatment Group A no separate classrooms were designated, as the pupils were grouped for testing. Classroom time for all treatments was the same: 180 minutes per day.

Description of Participating Communities

Table VII shows available data on the communities served by the eight elementary schools participating in this study.

Communities

	Treatment Groups A and B	Treatment Group C
Median community education	6 years	8 years
Median community income	$2,001-$3,000	$3,001-$4,000
Population	2 schools, 1,000-2,500 2 schools, rural farms	3 schools, 2,501-10,000 1 school, rural farm

Description of Participating Teachers

Table VIII indicates the available data concerning the nine teachers participating in this study.

	Teachers								
	Treatment Groups A and B				Treatment Group C				
Teachers	1	2	3	4	1	2	3	4	5
Age	57	27	53	31	23	41	23	21	43
Marital status	M	S	M	S	M	M	S	M	M
Degree	none	AB	AB	AB	AB	AB	AB	AB	AB
Type credential	GE	GE	GE	GE	GE	GE	GE	GE	GE
Total years' teaching experience	9	5	9	4	1	7	2	1	9
Total years' kindergarten teaching experience	5	3	9	2	1	1	2	1	8

In general, Treatment C teachers had less experience than teachers of A and B. The experience of the C teachers, however, was specifically in the instructional procedures employed in the research

Rating of Teacher Competence

An attempt was made by the research team to evaluate the instructional abilities of participating teachers.

Table IX indicates a summary of the evaluations of Treatments A, B and C classroom teachers based on a 5-point scale in four major categories:

Class Structure:

1. Teacher structures for the children; directions and expectations are detailed and clearly spelled out.
2. Teacher is generally well organized and clear in assigning tasks; directions and expectations clear but not spelled out as above.
3. There is a moderate degree of structure and information on expectations; some degree of vagueness.
4. There is generally more vagueness than clarity and more looseness than structure.
5. Teacher is generally vague, and directions seem confusing to the children.

Extent of Class Participation:

1. High participation on part of most children at all times.
2. Moderately high participation on part of most children most of the time but with some variability.
3. Teacher has a group of children who are participating well most of the time, but a fairly large group who are not consistently with the teacher.
4. Participation is highly variable but tends to be low quite often.
5. Class is generally unresponsive with only a very few children actually participating.

Awareness of and Attention Paid to Individual Needs of Pupils:

1. Teacher exceptionally aware of pupil needs with effective adjustment of instruction in light of these needs.
2. Teacher is generally aware of pupil needs and attempts to make the necessary instructional adjustments in light of these needs.
3. There is a moderate awareness and adjustment of instruction by the teacher based upon the needs of individual pupils in the class.

4. Limited awareness of and attention paid to individual needs of pupils.

5. Total lack of awareness on the part of the teacher to the individual instructional needs of the pupils.

Overall Teacher Competence:

1. Excellent
2. Good
3. Adequate
4. Poor
5. Incompetent

	Treatment Groups A and B				Treatment Group C				
Teachers	1	2	3	4	5	6	7	8	9
Class structure	1	4	3	4	1	5	2	2	1
Class participation	1	2	3	5	2	5	1	2	3
Individual needs	1	3	3	4	2	5	2	2	3
Teacher competence	1	3	3	4	2	5	2	2	2

Teachers of Group C were rated higher than the A and B teachers. No doubt, the additional year of experience with the instructional procedures contributed to this additional competence.

Evaluation of Treatment Groups A, B and C.

A total of 449 pupils participated in this research. It will be apparent from the tables presented in this section that the number of pupils for whom data are available fluctuates among the variables analyzed. In spite of these population inconsistencies, it was concluded that in view of the atypical nature of the population all data should be reported. This analysis of data has four general classifications:

- Statistical description of the total population of Treatment Groups A, B and C.
- Comparison of the English language achievements of Treatment Groups A and B.
- Comparison of the English language achievements of Treatment Groups B and C.
- Comparison of the achievements of Treatment Groups A, B and C, according to levels of competence in English language usage.

Table X indicates the mean chronological age and range for Treatment Groups A, B and C, as of October 1st of year tested.

Treatment Groups A, B, C - Chronological Age

Mean	S.D.	Range	n
66.11	6.08	57 mo. - 90 mo.	412

Table XI indicates the number of children in Mexican-American families of pupils in Treatment Groups A, B and C.

Treatment Groups A, B, C - Family Size

Mean	S.D.	Range	n
5.00	2.26	1 child - 9 children	355

Table XII indicates the ordinal rank of individual pupils of all Treatment Groups in Mexican-American families.

Treatment Groups A, B, C - Ordinal Rank

Mean	S.D.	Range	n
3.64	2.25	1st child - 9th child	316

In general, pupils involved in this study were not the first of their family to attend public school. The range of English language abilities evident among the pupils probably, in some measure, is due to the influence of older siblings attending public schools.

Table XIII indicates the birthplaces of Treatment Groups A, B and C kindergarten pupils.

Birthplace of Pupils

Location	Number
California	295
Texas	77
Mexico	15
Elsewhere in U.S.	10
	n = 397

Table XIV indicates the birthplaces of parents of pupils studied in USOE Project 2821.

Birthplace of Parent(s)

Location	Number
California	165
Texas	84
Mexico	69
One - U.S.; One - Mexico	66
Elsewhere in U.S.	12
	n = 396

The locations shown are for individual parents. In many instances data concerning the male parent were unknown by the female head of the family.

Table XV indicates the type of housing in which Treatment Groups A, B and C pupils lived.

Housing

Type	Number
Shack or substandard house in slum area	94
Deteriorating area, marginal housing	301
Home in average residential area of well-kept property, moderate cost	37
Better than average homes or apartments	0
	n = 432

Table XVI indicates the home language employed by parent(s) in communicating with children of Treatment Groups A, B and C.

Home Language

Communication Pattern	Number
Both parents use Spanish almost exclusively with children	208
One parent uses English and the other Spanish	82
Both parents use Spanish and English more than casually	134
Both parents use English exclusively	14
	n = 438

In the categories described above, in those 134 instances of more than casual use of Spanish and English, the language used by parents was polyglot.

Table XVII indicates Treatment Groups A, B and C pupil facility in Spanish.

Spanish Facility

Category	Number
Little or no facility in Spanish	8
Able to understand simple directions but unable to converse	79
Able to converse	351
	n = 438

Table XVIII indicates Treatment Groups A, B and C pupil facility in English.

English Facility

Category	Number
Little or no facility in English	119
Able to understand simple directions but unable to converse	167
Able to converse	152
	n = 438

Table XIX indicates the mean number of school days attended by pupils in Treatment Groups A, B and C.

School Attendance

Mean	S.D.	Range	n
122.85	40.31	3 days - 166 days	410

A major problem encountered in this research was the irregular attendance patterns of pupils.

Table XX indicates by category the attendance patterns of Treatment Groups A, B and C pupils.

Attendance Pattern

Category	Number
Entered in fall and remained in school	314
Entered in winter and remained in school	30
Entered in spring and remained in school	13
Entered in fall and left before spring	44
Entered in winter and left before spring	11
Entered, left, re-entered	17
	n = 429

Table XXI indicates the number of children in Mexican-American families by separate Treatment Group.

Family Size A vs. B vs. C

Treatment Group	Mean	S.D.	Range	n
A	5.11	2.22	1-9	90
B	4.84	2.34	1-9	172
C	5.20	2.15	1-9	93

Family size among treatment groups varied little. The average family contained five children, and the range was the same for all groups.

Table XXII indicates the ordinal rank of pupils by separate Treatment Group.

Ordinal Rank

Treatment Group	Mean	S.D.	Range	n
A	3.62	2.27	1st-9th	88
B	3.73	2.40	1st-9th	163
C	3.44	1.79	1st-9th	65

Table XXIII indicates the birthplaces of pupils by separate Treatment Group.

Pupil Birthplace

Treatment Group	A	B	C
Location	n=125	n=179	n=93
California	85	132	78
Texas	32	34	11
Mexico	7	6	2
Elsewhere in U.S.	1	7	2

Table XXIV indicates the birthplaces of parent(s) by separate Treatment Group.

Birthplace of Parent(s)

Treatment Group	A	B	C
Location	n=124	n=179	n=94
California	49	132	52
Texas	27	34	15
Mexico	25	6	6
One - U.S.; One - Mexico	21	7	14
Elsewhere in U.S.	2	0	7

Table XXV indicates the type of housing found in the various localities by separate Treatment Group.

Housing

Treatment Group	A	B	C
Type	n=138	n=191	n=103
Shack or substandard house in slum area	22	59	13
Deteriorating area, marginal housing	94	123	84
Home in average residential area of well-kept property, moderate cost	22	59	6
Better than average homes or apartments	0	0	0

Deteriorating area housing seemed most prevalent among all Treatment Groups.

Table XXVI indicates the home language employed by parent(s) in communicating with their children by separate Treatment Group.

Home Language

Treatment Group	A	B	C
Communication Pattern	n=138	n=196	n=104
Both parents use Spanish almost exclusively with children	71	101	36
One parent uses English and the other Spanish	14	45	23
Both parents use Spanish and English more than casually	48	45	41
Both parents use English exclusively	5	5	4

Similar communication patterns were employed by parent(s) of the three Treatment Groups.

Table XXVII indicates pupil facility in Spanish by separate Treatment Group.

Spanish Facility

Treatment Group	A	B	C
Category	n=138	n=196	n=104
Little or no facility in Spanish	1	4	3
Able to understand simple directions but unable to converse	16	28	35
Able to converse	121	164	66

Facility in the use of Spanish was irregular within treatment groups but similar among treatment groups.

Table XXVIII indicates pupil facility in English by separate Treatment Group based on classroom teacher assessment.

English Facility

Treatment Group Category	A n=138	B n=196	C n=104
Little or no facility in English	25	75	19
Able to understand simple directions but unable to converse	65	66	36
Able to converse	48	55	49

Treatment Group B appears to have poorer English language facility than either Treatments A or C. In the case of Treatment A the designation as to language facility was made in May; in B, in November. This may account for differences. Additionally, these judgments were quite subjective and reflected teacher opinion rather than objective evidence of language facility.

Statistical Analysis

Tables XXIX to XXXV indicate the comparative achievements of Treatment Groups A and B on the following selected measurements:

Measurement	Administration Treatment Group A	 B
Goodenough-Harris Drawing Test	May, 1964	May, 1965
Habilidad-General, Nivel Primario	May, 1964	May, 1965
Metropolitan Readiness Tests, Sections 1-4	May, 1964	May, 1965
Linguistic Capacity Index (Form A)	May, 1964	May, 1965

Table XXIX indicates the differences in chronological ages between Treatment Group A males and females and Treatment Group B males and females as of October 1st of year tested.

Chronological Age

Treatment Group	Mean	S.D.	n	t value
A	64.73	6.95	134	.7543
B	65.15	4.74	179	

There were no significant differences between Treatment Groups A and B on the basis of chronological age.

Table XXX indicates differences in intelligence as revealed by the Goodenough-Harris Drawing Test between Treatment Group A total population and Treatment Group B total population.

Goodenough-Harris, Intelligence

Treatment Group	Mean	S.D.	n	t value
A	85.46	14.03	127	1.06
B	83.56	14.99	137	

Treatment Group A pupils were slightly, though not significantly, more intelligent than the Treatment B population as revealed by the measurement.

Table XXXI indicates achievement differences between Treatment Groups A and B total populations as revealed by the Total Score, Habilidad-General, Nivel Primario.

Habilidad-General, Total Score (65 possible)

Treatment Group	Mean	S.D.	n	t value
A	28.83	11.40	111	1.2883
B	27.02	10.50	138	

There were no significant differences between Treatment Groups on this measure of general ability.

Table XXXII indicates achievement differences between Treatment Groups A and B total populations as revealed by scores, Vocabulary Section Habilidad-General.

Habilidad-General, Vocabulary (25 possible)

Treatment Group	Mean	S.D.	n	t value
A	13.97	4.76	117	5.17**
B	11.03	4.22	139	

** Level of confidence .01

There were statistically significant differences favoring Treatment Group A on the Vocabulary Section of the Habilidad. Since this measure was administered in Spanish, results indicate that Treatment Group A could recognize more native language vocabulary items than Treatment Group B. There are three possible explanations of this finding:

- Treatment A pupils were more facile in Spanish than Group B pupils, an assumption not supported by the subjective evidence revealed in Table XXVII.
- Treatment A pupils were as dependent on Spanish at the end of the kindergarten year as they had been in September.
- Treatment Group B pupils were less dependent on Spanish following the kindergarten linguistic instruction.

Table XXXIII indicates achievement differences between Treatment Groups A and B total populations as revealed by scores, Association Section Habilidad-General.

Habilidad-General, Association (20 possible)

Treatment Group	Mean	S.D.	n	t value
A	9.19	5.44	119	1.69
B	10.32	5.20	137	

Slight, though not significant, differences favored Treatment Group B.

Table XXXIV indicates achievement differences between Treatment Groups A and B total populations as revealed by scores, Classification Section Habilidad-General.

Habilidad-General, Classification (20 possible)

Treatment Group	Mean	S.D.	n	t value
A	6.25	3.56	117	.76
B	5.89	3.94	136	

Slight differences favored Treatment Group A.

A total of three administrations of the Habilidad-General were made on Treatment Group B:

- Group administration - January, 1965
- Individual administration - January, 1965 random selection of 50 pupils
- Group administration - May, 1965

The purpose of these administrations was to determine the reliability of the measure in group test vs. individual test situations for control variable purposes and to utilize the potentialities of the instrument as a criterion measure of pupil abilities in following directions.

Tables XXXV and XXXVI indicate score differences among Treatment B pupils on the basis of group administration - January, 1965; individual administration - January, 1965; and group administration - May, 1965.

Table XXXV contrasts the total score, Habilidad-General, of Treatment Group B (all pupils) obtained by group testing procedures with similar scores of a randomly selected group of 30 pupils of the B population obtained by individual test procedures - January, 1965.

Habilidad-General, Group vs. Individual Administration (65 possible)

	Mean	S.D.	n	t value
Group Administration January, 1965	16.64	9.84	156	8.04**
Individual Administration January, 1965	33.38	10.72	31	

** Level of confidence .01

It appears that test results obtained by group procedures early in the kindergarten year be accepted with caution, if not with doubt. The statistically significant differences favoring individual administration indicates a need for improving the existing measurement instrumentation. Without question, attention and persistence abilities and the ability to follow directions significantly affect group scores in kindergarten test procedures for atypical populations.

Table XXXVI indicates differences in Total Score achievements, Habilidad-General, in Treatment Group B pupils between January and May, 1965.

Habilidad-General, Total Score (65 possible)

	Mean	S.D.	n	t value
January	16.64	9.84	156	8.70**
May	27.02	10.50	138	

** Level of confidence .01

The ability to follow directions is a significant factor in score differences attained by Treatment B pupils in a comparison of January and May scores. In effect, below Grade One the Habilidad seems best suited as a criterion measure of pupil growth in ability to follow directions rather than a control measure of general intellectual ability.

The Metropolitan Readiness Tests (Form R), Sections 1-4, were intended as the primary criterion variables. Linguistic analysis of these tests indicated, however, that this measure would not adequately assess pupil improvements in English phonology, vocabulary and grammar. Pending the development of more sensitive instruments, Tables XXVIII to XXXI are presented as the best available measurements of the general learning readiness of Treatment Groups A and B.

Table XXXVII indicates the achievement of Treatment Group A male and female populations and the Treatment Group B male and female populations on Total Score, Tests 1-4, Metropolitan Readiness Tests (Form R), May testing.

Metropolitan Readiness Tests 1-4 (66 possible)

Treatment Group	Mean	S.D.	n	t value
A	38.85	12.37	127	1.33
B	36.79	5.40	149	

Slight differences favored Treatment Group A on this measurement.

Table XXXVIII indicates differences in scores obtained by Treatment Group A male and female populations and Treatment Group B male and female populations on the Word Meaning section of the Metropolitan Readiness Tests (Form R).

Word Meaning, MRT Form R (19 possible)

Treatment Group	Mean	S.D.	n	t value
A	11.64	3.70	128	.2536
B	11.75	3.54	149	

Table XXXIX indicates differences in scores obtained by Treatment Group A males and females and Treatment Group B males and females on the Sentences section of the Metropolitan Readiness Tests (Form R).

Sentences, MRT Form R (14 possible)

Treatment Group	Mean	S.D.	n	t value
A	7.89	3.01	128	.8082
B	7.59	3.00	149	

Table XL indicates differences in scores obtained by Treatment Group A males and females and Treatment Group B males and females on the Information section of the Metropolitan Readiness Tests (Form R).

Information, MRT Form R (14 possible)

Treatment Group	Mean	S.D.	n	t value
A	7.49	3.02	127	.9842
B	9.14	5.13	148	

Table XLI indicates differences in scores obtained by Treatment Group A males and females and Treatment Group B males and females on the Matching section of the Metropolitan Readiness Tests (Form R).

Matching, MRT Form R (19 possible)

Treatment Group	Mean	S.D.	n	t value
A	9.77	5.24	127	1.58
B	8.91	5.40	149	

Apparently, score differences on the Matching section of the MRT accounted for the slight differences on Total Score sections 1-4 of the Metropolitan measure.

Tables XLII to XLV represent the achievements of Treatment A and B pupils on the Linguistic Capacity Index Form A. Data on the Total Score and Syntax sections were not statistically analyzed as there was a difference in the number of items in the Syntax section administered to Treatment Group B pupils in May, 1965. The syntax test administered to Treatment A pupils in May, 1964, contained 25 items; the syntax test administered to Treatment B pupils contained 17 items.

Additionally, items 15, 16, 17, of the Syntax section of Form A were missed by all pupils in both Treatment Groups. The directions for measuring pupil understanding of the adjectives "some," "all," and "each" were obviously confusing.

Table XLII indicates the scores achieved by Treatment Groups A and B on Total Score, Linguistic Capacity Index Form A.

Total Score, LCI Form A

	Mean	S.D.	n
Treatment Group A - May, 1964 Linguistic Capacity Index Form A (70 possible)	48.75	10.76	114
Treatment Group B - May, 1965 Linguistic Capacity Index Form A (62 possible)	40.53	9.22	130

Table XLIII indicates the score differences of Treatment Groups A and B on the Vocabulary section of the Linguistic Capacity Index Form A.

Vocabulary Section, LCI Form A (25 possible)

Treatment Group	Mean	S.D.	n	t value
A	19.19	4.96	117	1.70
B	18.06	5.36	130	

Slight differences favored Group A on this measurement.

Table XLIV indicates the score differences of Treatment Groups A and B on the Phonology section of the Linguistic Capacity Index.

Phonology Section, LCI Form A (20 possible)

Treatment Group	Mean	S.D.	n	t value
A	11.71	2.86	116	.1340
B	11.66	2.51	130	

The Syntax section of the LCI Form A administered to Treatment Group A pupils contained eight additional items not included in the measure administered to the Treatment B population.

Table XLV indicates the achievements of Treatment Group A and Treatment Group B pupils on the Syntax section of the Linguistic Capacity Index Form A administered in May, 1964, and May, 1965.

Syntax Section, LCI Form A

	Mean	S.D.	n
Treatment Group A - May, 1964 Syntax Section, LCI Form A (25 possible)	17.54	5.32	117
Treatment Group B - May, 1965 Syntax Section, LCI Form A (17 possible)	10.78	2.76	130

Review of Tables XXIX to XLV, contrasting Treatment Group A with Treatment Group B, reveals few significant differences on control or criterion variables.

It is a relatively easy matter to suggest reasons which hopefully would account for the absence of differences favoring Treatment B pupils. Such hypotheses, however, contribute little to the development of additional needed research in the area of early grade English language programs for foreign language oriented pupils in our schools.

Several factors, however, unquestionably affected the results of this research project:

- The paucity of existing language measurement for atypical populations in lower elementary grades.
- The necessity of in-service preparation for foreign language teaching stressing not only the theoretical linguistic basis but also the methodological aspects of grouping.

- Provision for continuing diagnostic appraisal of English language growth.
- Differentiating and intensifying instruction at specific points of language weakness.

Statistical Comparisons: Treatment Group B vs. C

It was possible in this research to obtain data on a comparable population of kindergarten Spanish language oriented pupils who were being instructed by teachers familiar with the linguistic theory of USOE 2821.

Five kindergarten teachers of the Clovis, California, Unified School District teach in schools attended by Spanish-speaking pupils. Much of the early experimentation in classroom procedure and linguistic materials development had been accomplished in these schools. Additionally, the instructional procedures employed in these kindergartens were highly differentiated and language-skills oriented.

Tables XXI to XXVIII compare pertinent data regarding teachers, pupils, and community status of Treatment Groups B and C.

The 1964-1965 experimental year afforded many opportunities to examine the language growth of the Treatment B and C populations through the use of two new tests: Linguistic Capacity Index Form B and Phonemic Production Survey. These tests were not available for the Treatment A 1963-64 population; and, as a result, no comparisons involving Treatment A pupils could be made.

Tables XLVII to LXXI indicate the achievements of Treatment Group B and C pupils on the basis of the following selected measurements:

Measurement	Administration	
Treatment Group:	B	C
Goodenough-Harris Drawing Test	January, 1965	January, 1965
Habilidad-General, Nivel Primario	January, 1965	January, 1965
Habilidad-General, Nivel Primario	May, 1965	May, 1965
Linguistic Capacity Index Form B	October, 1964	October, 1964
Linguistic Capacity Index Form B	May, 1964	May, 1964
Phonemic Production Survey	October, 1964	October, 1964
Phonemic Production Survey	May, 1965	May, 1965
Metropolitan Readiness Tests Form R	May, 1965	May, 1965

Table XLVI compares the chronological ages of Treatment Group B males and females with Treatment Group C males and females as of October, 1965.

Chronological Age

Treatment Group	Mean	S.D.	n	t value
B	65.15	4.74	179	2.07*
C	66.49	5.32	99	

* Level of confidence .05

Pupils in Treatment Group C were older than those enrolled in the kindergartens of Treatment Group B. A possible explanation might lie in the fact that selected failing pupils of Treatment Group B were advanced to a pre-first grade class while no such provision was made for Treatment Group C pupils.

Table XLVII compares the intelligence quotients of Treatment B males and females with quotients of Treatment C males and females as revealed by the Goodenough-Harris Drawing Test administered in January, 1965.

Intelligence

Treatment Group	Mean	S.D.	n	t value
B	83.56	14.99	137	1.44
C	86.82	16.55	79	

As indicated by this measurement, Treatment Group C pupils were slightly more intelligent than the Treatment Group B population. Of significance, however, is the relatively low mean IQ of both Treatment Groups and the large standard deviations indicating a wide range of mental ability. This range of mental ability complicated by differences in English language facility gives some indication of the complexity of grouping kindergarten pupils for English language programs.

Table XLVIII compares the Total Score achievements of Treatment Group B males and females with Treatment Group C males and females on the Habilidad-General administered in January, 1965.

Habilidad-General, Total Score (65 possible)

Treatment Group	Mean	S.D.	n	t value
B	16.64	9.84	156	.7124
C	15.65	10.34	80	

There were no significant differences between Treatment Groups on the basis of Total Score, Habilidad-General. The relatively low scores attained by both groups were probably caused by the group testing procedures employed. Review of Table XXXV will indicate score differences obtained through group and individual testing.

Table XLIX compares the achievements of Treatment Group B total population with Treatment Group C total population on Total Score, Linguistic Capacity Index Form B administered in October, 1964.

Linguistic Capacity Index Form B (60 possible)

Treatment Group	Mean	S.D.	n	t value
B	25.45	13.30	171	2.80**
C	29.80	10.82	86	

** Level of confidence .01

When the Linguistic Capacity Index was employed as a control variable, score differences significantly favored the Treatment C population. In spite of the rather subjective evidence revealed in Table XXVIII, it appears that Treatment C pupils were more facile in the use of English on entrance to kindergarten than was the Treatment B population.

Table L indicates the score differences obtained on the Vocabulary Section, Linguistic Capacity Index Form B, between Treatment Group B and Treatment Group C total populations, October, 1964.

Vocabulary Section, LCI Form B (20 possible)

Treatment Group	Mean	S.D.	n	t value
B	8.42	4.76	171	1.64
C	9.39	4.34	86	

Differences approaching significance favored the Treatment C population. In light of the items tested, however, (Appendix C) the scores for both Treatment Groups are relatively low. Difficulty in following directions seems a significant factor in early grade test administration.

Table LI compares the differences in Phonology score, Linguistic Capacity Index Form B, between the total populations of Groups B and C, October, 1964.

Phonology Section, LCI Form B (20 possible)

Treatment Group	Mean	S.D.	n	t value
B	7.47	4.31	171	3.54**
C	9.34	3.81	86	

** Level of confidence .01

Statistically significant differences favored the Treatment C population. In that one of the major objectives of this research was the development of the ability to recognize phonemes contrasted in English but not in Spanish, this table lends additional support to the contention that the Treatment C pupils were more facile in understanding the phonological construct of English.

Table LII compares the total populations of Treatment Groups B and C on the basis of Syntax scores obtained by the October, 1964, testing, Linguistic Capacity Index Form B.

Syntax Section, LCI Form B (20 possible)

Treatment Group	Mean	S.D.	n	t value
B	9.60	5.19	171	2.48*
C	11.05	4.00	86	

* Level of confidence .05

Knowledge of English syntax, to the significant degree indicated by this table, lends additional support to the obvious English language superiority of Treatment Group C.

Before attempting to draw inferences from the data presented in Tables LIII to LV, the reader is referred to page 50 for a review of the test content and procedures of the Phonemic Production Survey.

Table LIII indicates differences obtained by a comparison of scores of the Treatment B and Treatment C total populations on the ability to produce English vocabulary through the use of picture stimuli. Phonemic Production Survey, October, 1964.

Vocabulary PPS (60 possible)

Treatment Group	Mean	S.D.	n	t value
B	22.83	15.37	165	3.02**
C	29.00	14.75	80	

** Level of confidence .01

The importance of control variable testing favoring Treatment Group C is emphasized in this table. The Treatment C pupils were able to recognize almost 50 percent of the vocabulary items represented by pictures in the Phonemic Production Survey.

Table LIV indicates the mean scores obtained by the total populations of Treatment Groups B and C on the ability to produce certain phonemes of English without the oral stimulation of the examiner. These scores were obtained through an administration of the Phonemic Production Survey in October, 1964.

Phonemic Production, Unstimulated (121 possible)

Treatment Group	Mean	S.D.	n	t value
B	44.53	27.71	165	3.24**
C	57.38	29.66	80	

** Level of confidence .01

Two major conclusions may be drawn from an interpretation of this table:

- The Treatment C pupils were obviously able to produce English phonemes more accurately than the Treatment B population.
- The wide range of phoneme production ability as evidenced by the large standard deviations of both Treatment Groups represents a major obstacle in classroom implementation of English language programs.

Table LV indicates the total phonemic production ability, stimulated and unstimulated, of Treatment Groups B and C. These scores were obtained through an administration of the Phonemic Production Survey in October, 1964.

Total Phonemic Production Ability, PPS (121 possible)

Treatment Group	Mean	S.D.	n	t value
B	78.52	27.00	165	2.54*
C	87.75	26.33	80	

* Level of confidence .05

Table LV substantiates the two major conclusions of Table LIV. The differences, however, are statistically smaller indicating that most Spanish-speaking pupils can mimic English phonemes.

Table LVI compares the achievements of Treatment Groups B and C total populations on Total Score, Linguistic Capacity Index Form B, administered in May, 1965.

Total Score, LCI Form B (60 possible)

Treatment Group	Mean	S.D.	n	t value
B	40.24	8.35	134	3.33**
C	44.43	8.81	73	

** Level of confidence .01

Treatment Group C pupils scored significantly higher on the May administration of the LCI Form B. Based on results of this measure, mean language growth of both Treatment Groups between October and May was approximately the same.

Table LVII indicates the score differences obtained on the Vocabulary section, Linguistic Capacity Index Form B, between Treatment Groups B and C total populations, May, 1965.

Vocabulary Section, LCI Form B (20 possible)

Treatment Group	Mean	S.D.	n	t value
B	13.88	3.09	134	3.06**
C	15.31	3.27	73	

** Level of confidence .01

Statistically significant differences favored Treatment C pupils on the Vocabulary subtest of the LCI Form B.

Table LVIII compares the differences in Phonology score, Linguistic Capacity Index Form B, between the total populations of Treatment Groups B and C, May, 1965.

Phonology Section, LCI Form B (20 possible)

Treatment Group	Mean	S.D.	n	t value
B	11.53	3.22	135	3.77**
C	13.21	2.98	73	

** Level of confidence .01

Significant score difference favored the Treatment C population.

Table LIX compares the total populations of Treatment Groups B and C on the basis of Syntax scores obtained through the May, 1965 testing, Linguistic Capacity Index Form B.

Syntax Section, LCI Form B (20 possible)

Treatment Group	Mean	S.D.	n	t value
B	14.83	3.22	135	1.96*
C	15.87	3.84	73	

* Level of confidence .05

Narrower though still significant differences favored Treatment Group C pupils.

Table LX indicates differences obtained through a comparison of scores of the Treatment B and Treatment C total populations on the ability to produce English vocabulary through the use of picture stimuli, Phonemic Production Survey, May, 1964.

Vocabulary, PPS (60 possible)

Treatment Group	Mean	S.D.	n	t value
B	44.82	10.83	134	5.02**
C	51.23	7.33	72	

** Level of confidence .01

Treatment Group C pupils could respond more accurately to the picture stimuli of the Vocabulary , PPS, to the significant degree revealed in Table LX.

Table LXI indicates the mean scores obtained by the total populations of Treatment Groups B and C on the ability to accurately produce certain phonemes of English without the oral stimulation of the examiner. These scores were obtained through a May, 1965 administration of the Phonemic Production Survey.

Phonemic Production, Unstimulated (121 possible)

Treatment Group	Mean	S.D.	n	t value
B	85.03	20.95	134	2.94**
C	92.65	15.67	72	

** Level of confidence .01

Treatment Group C pupils scored high on the ability to produce English phonemes without the aid of the examiner. The higher mean scores and the lower standard deviation indicates the Treatment C pupils were significantly more facile in English sound production following the experimental year.

Table LXII indicates the total phoneme production ability, stimulated and unstimulated, of Treatment Groups B and C. These scores were obtained through an administration of the Phonemic Production Survey, May, 1965.

Total Phoneme Production Ability (121 possible)

Treatment Group	Mean	S.D.	n	t value
B	107.14	9.12	134	2.47*
C	103.43	10.83	72	

* Level of confidence .05

On review, Table LXII seems inconsistent with earlier findings based on administrations of the Phonemic Production Survey. There are two possible explanations for the statistically significant differences favoring Treatment Group B on this measurement. The first one seems most logical.

- Treatment Group C pupils attempted more vocabulary items, resulting in a higher number of phoneme errors, unstimulated. This contention is supported by the findings in Table LX indicating that Treatment C pupils could recognize a higher number of vocabulary items than the Treatment B group. In effect, this meant that by not attempting the vocabulary items Treatment B pupils were given an opportunity to mimic the examiner and thus scored higher on stimulated phoneme production.
- One teacher in Group B was outstanding in her ability to improve the sound production achievements of her pupils. Other Treatment Group C teachers may not have been as particular about individual phonemes within words, concentrating instead on total vocabulary improvement.

Two additional detailed analyses of the October, 1964, and May, 1965, administrations of the Linguistic Capacity Index Form B and the Phonemic Production Survey were made:

- Analysis of mean gains on the Linguistic Capacity Index Form B as scored by three populations:

  Population x: Monolingual English
  200 kindergarten pupils from Clovis, California, schools not participating in the research.

  Population y: Bilingual, English and Spanish

  Population z: Monolingual Spanish
  Populations y and z were composed of kindergarten pupils of Treatments B and C grouped on the basis of English language facility.

- Analysis of the correct responses of pupils of Treatment Groups B and C on individual phonemes of the Phonemic Production Survey.

Table LXIII indicates the differences in mean scores among populations x, y, and z on all subtests and Total Score, Linguistic Capacity Index Form B.

Linguistic Capacity Index Form B - October, 1964-May, 1965

Population:	October, 1964 n	May, 1965 n
x (Monolingual, English)		200
y (Bilingual, English-Spanish)	147	128
z (Monolingual, Spanish)	103	92

Measure	Population	Scores October, 1964	 May, 1965	Gain
LCI Vocabulary (20 possible)	x		16.0	
	y	11.6	15.5	3.9
	z	3.3	12.5	9.22
LCI Phonology (20 possible)	x		15.8	
	y	10.7	13.4	2.6
	z	3.4	10.1	6.7
LCI Grammar (20 possible)	x		16.9	
	y	12.8	16.7	3.9
	z	4.7	13.0	8.1
LCI Total Score (60 possible)	x		48.8	
	y	35.2	45.7	10.7
	z	11.6	35.7	24.0

Table LXIII indicates that monolingual Spanish-speaking pupils made greater than averege gains on all subtests of the LCI based on fall and spring testings. Of greater significance, however, are the relatively narrow differences among population scores on the May, 1965, measurement. It appears that as a result of the kindergarten linguistic experiences, the populations are more nearly similar in English language abilities on entrance to first grade.

Table LXIV indicates the number and percentage of correct responses by item on the Grammar section of the Linguistic Capacity Index Form B, October, 1964-May, 1965, administration.

Item Analysis, Grammar Section, LCI

Population		October, 1964 n	May, 1965 n
x	(Monolingual English)		200
y-z	(Spanish language oriented)	250	220

Item Number(s)	Structure	Correct Responses Populations: y-z Oct., 1964 n	 %	 y-z May, 1965 n	 %	 x May, 1965 n	 %
1	can + a simple verb	74	29.6	121	55.0	145	72.5
2,4,7	be + -ing as a present tense	414	55.2	589	89.2	542	90.3
3,12	has + en as perfect tense	132	26.4	265	60.2	223	55.8
5,14	noun as indirect object	287	57.4	365	83.0	349	87.3
6	likes	140	56.0	192	87.2	191	95.5
8,18	is cold vs. has a cold	192	38.4	288	65.4	362	90.5
11	negative in verb + auxiliary construction	157	62.8	186	84.5	190	95.0
9,16	do - auxiliary constructions	194	38.8	288	65.5	318	79.5
10,19	-er and -est adjective comparison	261	52.2	366	83.2	382	95.5
20	more as adjective comparison	181	72.4	212	96.4	195	97.5
13	be going to as future	119	47.6	173	78.6	189	94.5
15	noun as noun-modifier	168	67.2	188	85.5	186	93.0
17	passive with be as past participle	72	28.8	108	49.1	114	57.0

Analysis of the results of the October and May testing, Grammar section, LCI, by language facility groups leads to several logical conclusions:

- The effectiveness of the linguistic program in teaching specific syntactic structures.

- An estimate of the range of syntactic recognition abilities of Spanish-speaking and English-speaking five year olds.
- The relative difficulty of these structures for Spanish-speaking and English-speaking pupils.

Similar, also, to the results of Table LXIII, the mean differences among the populations markedly narrows in the spring testing. Undoubtedly, English syntactic structure can be taught through formal classroom procedures in the kindergarten year.

Table LXV indicates the rank order, number and percentage of correct responses of pupils of Treatment Groups B and C between October, 1964 and May, 1965, on the basis of total phoneme production, Phonemic Production Survey.

Correct Responses, Total Phoneme Production, PPS

Code:

vd	voiced consonant
vl	voiceless consonant
r	before r
f̲	final position
t̄-	beginning position
-t-	medial position
-t	ending position

Population: n=221 n=183

Consonants	October, 1964		May, 1965	
	Number	Percent	Number	Percent
/ -ʒ- /	56	25.3	62	33.8
/ -θ- /	72	32.5	102	55.7
/ -n- /	74	33.4	112	61.2
/ -f /	83	37.5	66	36.0
/ -d /	85	38.5	122	66.6

Table LXV (continued)

Population:	n=221		n=183	
Consonants	October, 1964		May, 1965	
	Number	Percent	Number	Percent
/ -s- /	93	42	135	73.7
/ θ- /	96	43.4	125	68.3
/ -θ /	97	43.8	117	63.9
/ v- /	99	44.7	109	59.5
/ -b /	105	47.5	150	81.9
/ -ž- /	113	51.1	142	77.5
/ z- /	127	57.4	142	77.5
/ -d- /	126	57	139	75.9
/ -š /	129	58.3	138	75.4
/ š- /	132	59.7	135	73.7
/ ǯ - /	139	62.8	168	91.8
/ -n /	142	64.2	109	59.5
/ - ǯ - /	144	65.1	161	87.9
/ -r- /	144	65.1	151	82.5
/ -t /	145	65.2	139	75.9
/ -č /	155	70.1	141	77.0
/ s- /	155	70.1	144	78.6
/ -č- /	157	71.0	159	86.8
/ -v- /	157	71.0	160	87.4
/ -t- /	157	71.0	146	79.7
/ -g /	158	71.1	176	96.1
/ -k- /	161	72.8	137	74.8

Table LXV (continued)

Consonants	Population: n=221		n=183	
	October, 1964		May, 1965	
	Number	Percent	Number	Percent
/ -p- /	162	72.8	178	97.2
/ č- /	163	72.9	147	80.3
/ -ž /	85	38.4	74	40.4
/ y- /	173	78.2	172	93.9
/ -š- /	174	78.7	166	90.7
/ -h- /	175	79.1	174	95.0
/ -l- /	175	79.1	162	88.5
/ -v /	176	79.6	173	94.5
/ -ǰ- /	176	79.6	157	85.7
/ -ǰ /	176	79.6	139	75.9
/ -ʔ /	178	80.5	171	93.4
/ -g- /	180	81.4	154	84.1
/ -z- /	182	82.3	129	70.4
/ h- /	183	82.8	174	95.0
/ -z /	184	83.3	168	91.8
/ -l /	184	83.3	167	91.2
/ r- /	189	85.6	180	98.3
/ -s /	195	88.2	173	94.5
/ ǰ- /	198	89.5	174	95.0
/ -m /	200	90.4	181	98.9
/ -r /	202	91.4	180	98.3
/ w- /	202	91.4	182	99.4

Table LXV (continued)

Population:	n=221		n=183	
Consonants	October, 1964		May, 1965	
	Number	Percent	Number	Percent
/ t- /	202	91.4	177	96.7
/ -b- /	203	91.8	177	96.7
/ -k /	203	91.8	174	95.0
/ p- /	206	93.2	181	98.9
/ f- /	206	93.2	181	98.9
/ -f- /	206	93.2	178	97.2
/ -w- /	206	93.2	178	97.2
/ l- /	207	93.6	183	100
/ d- /	210	95.0	183	100
/ -p /	207	93.6	179	97.8
/ -y- /	208	94.1	167	91.2
/ g- /	208	94.1	179	97.8
/ -m- /	209	94.5	180	98.3
/ b- /	209	94.5	180	98.3
/ k- /	211	95.4	179	97.8
/ n- /	215	97.2	182	99.4
/ m- /	215	97.2	182	99.4
/ θr- /	108	48.8	176	96.1
/ -nz /	129	58.3	112	61.2
/ hw- /	134	60.6	144	78.6
/ fr- /	138	62.4	166	90.7
/ kl- /	157	71.0	171	93.4

Table LXV (continued)

Consonants	October, 1964		May, 1965	
Population:	n=221		n=183	
	Number	Percent	Number	Percent
/ gr- /	160	72.3	171	93.4
/ fl- /	163	73.7	160	87.4
/ -ŋ z /	167	75.5	147	80.3
/ sn- /	169	76.4	162	88.5
/ sp- /	170	76.9	171	93.4
/ tr- /	170	76.9	177	96.7
/ dr- /	172	77.8	173	94.5
/ st- /	174	78.7	162	88.5
/ -br- /	174	78.7	174	95.0
/ -nts /	175	79.1	173	94.5
/ sk- /	176	79.6	162	88.5
/ -lz /	177	80.0	178	97.2
/ sw- /	177	80.0	168	91.8
/ bl- /	181	81.9	178	97.2
/ br- /	183	82.8	180	98.3
/ -rz /	187	84.6	159	86.8
/ kr- /	192	86.8	180	98.3
/ -rt /	197	89.1	167	91.2
/ -ks /	211	95.4	180	98.3
/θ / --f	205	92.7	176	96.1
/ i-iy / -- / r /	204	92.3	179	97.8

Table LXV (continued)

Population:	n=221		n=183	
Vowels	October, 1964		May, 1965	
	Number	Percent	Number	Percent
/ə / --Before Voiceless Consonants	113	51.1	150	81.9
/ə / --Before /r/	132	59.7	154	84.1
/ə / --Before Voiced Consonants	132	59.7	140	76.5
/ i / --vd	133	60.1	111	60.6
/æ/ --vl	144	65.1	148	80.8
/ u / --vl	151	68.3	167	91.2
/ i / --vl	161	72.8	174	95.0
/ e / --vd	165	74.6	159	86.8
/ ow / -- Final	170	76.9	167	91.2
/ a / --vl	174	78.7	166	90.7
/ɔ/ --vd	179	80.9	182	99.4
/ ey / --vl	187	84.6	179	97.8
/ uw / --vl	189	85.5	178	97.2
/ a / --vd	189	85.5	177	96.7
/ e~ey / -- / r /	190	85.9	177	96.7
/ iy / --vd	191	86.4	183	100
/ iy / --f	192	86.8	182	99.4
/ aw / --vl	196	88.6	182	99.4
/ o / -- / r /	197	89.1	183	100
/æ/ -- vd	197	89.1	173	94.5

Table LXV (continued)

Vowels	October, 1964		May, 1965	
Population:	n=221		n=183	
	Number	Percent	Number	Percent
/ ay / --vl	198	89.5	183	100
/ iy / --vl	198	89.5	182	99.4
/ o / --vd	200	90.4	179	97.8
/ e / --vl	203	91.8	177	96.7
/ aw / --vd	206	93.2	182	99.4
/ uw / --f	209	94.5	183	100
/ a / --r	210	95.0	180	98.3
/ ay / --vl	211	95.4	183	100
/ oy / --f	212	95.9	183	100

There was a total of three administrations of the Habilidad-General, Nivel Primario, made on the Treatment B population:

- January, 1965 group administration
- January, 1965 individual administration (random population)
- May, 1965 group administration

and two administrations conducted with the Treatment C population:

- January, 1965 group administration
- May, 1965 group administration.

Table LXVI indicates the differences in Total Score obtained through the May, 1965, group administration of the Habilidad-General for Treatment Groups B and C total populations.

Habilidad-General, Total Score (65 possible)

Treatment Group	Mean	S.D.	n	t value
B	27.02	10.50	138	5.82**
C	17.96	11.25	78	

** Level of confidence .01

The statistically significant difference indicated in Table LXVI should be interpreted after review of Table XLVIII, which indicated no differences between Treatments B and C on the January administration. There are three possible explanations for this circumstance:

- The relatively low scores for both Treatment Groups on the January administration tend to support the hypothesis that the group testing procedures were inappropriate for a kindergarten population. Table XXXV, which compares scores of individual and group administrations, lends credence to this hypothesis.
- The English language superiority of Treatment Group C, Table XXVIII as revealed through an analysis of scores of the Linguistic Capacity Index Form B, would be a liability with the Spanish directions of the Habilidad.
- Dependence on Spanish was more typical of Treatment Group B pupils after the experimental program.

Tables LXVII to LXXI compare score differences on Total Score and on various subtests of the Metropolitan Readiness Tests Form R which were intended as the criterion variables of English language growth resulting from the linguistic procedures employed in teaching English as a foreign language.

Table LXVII compares the Total Scores of the male and female populations of Treatment Groups B and C on the Language subtests, Metropolitan Readiness Tests Form R, May, 1965.

Total Score, Metropolitan Readiness (66 possible)

Treatment Group	Mean	S.D.	n	t value
B	36.79	13.08	149	2.89**
C	42.09	12.91	76	

** Level of confidence .01

Statistically significant differences favored the Treatment Group C population on the May, 1965, end of kindergarten year of measurement.

Table LXVIII compares scores obtained by the male and female populations of Treatment Groups B and C on the subtest Word Meaning, Metropolitan Readiness Tests, May, 1965.

Word Meaning, Metropolitan Readiness Tests (19 possible)

Treatment Group	Mean	S.D.	n	t value
B	11.75	3.54	149	1.97*
C	12.72	3.46	76	

* Level of confidence .05

Smaller, though still significant, differences favored the Treatment Group C population on the Word Meaning subtest of the Metropolitan.

Table LXIX compares scores obtained by the male and female populations of Treatment Groups B and C on the Sentences subtest of the Metropolitan Readiness Tests administered in May, 1965.

Sentences, Metropolitan Readiness Tests (14 possible)

Treatment Group	Mean	S.D.	n	t value
B	7.59	3.00	149	.2289
C	7.69	3.15	76	

Score achievements of both Treatment Groups on this measure were approximately the same.

Table LXX compares scores obtained by Treatment Groups B and C males and females on the Information subtest of the Metropolitan Readiness Tests administered in May, 1965.

Information, Metropolitan Readiness Tests (14 possible)

Treatment Group	Mean	S.D.	n	t value
B	9.14	5.13	148	1.76
C	9.96	3.48	76	

Slight though not significant differences favored the Treatment C population.

Table LXXI compares scores obtained by males and females of Treatment Groups B and C on the subtest Matching, Metropolitan Readiness Tests administered in May, 1965.

Matching, Metropolitan Readiness Tests (19 possible)

Treatment Group	Mean	S.D.	n	t value
B	8.91	5.40	149	4.06**
C	11.86	4.99	75	

** level of confidence .01

Statistically significant differences at the .01 level favored the Treatment Group C pupils on this subtest.

Statistical Analysis: Levels of English Language Facility

A three-way analysis of variance was conducted on the basis of sex treatment and level of English language facility.

A level of English language facility was determined for each pupil of Treatment Groups B and C through the use of pupil data cards completed by the classroom teacher, a home visit by a member of the research team accompanied by the school nurse, and classroom interviews with individual pupils:

Level 1 - Little or no facility in English
Level 2 - Able to understand simple directions but unable to carry on a conversation
Level 3 - Able to carry on a conversation

There were two administrations of the Linguistic Capacity Index Form B (October, 1964 - May, 1965) and two administrations of the Phonemic Production Survey (October, 1964 - May, 1965). The comparisons which follow were based on pupil achievements on those selected measurements between the October and May testing periods.

Table LXXII indicates the analysis of variance on the basis of score gains between October, 1964 and May, 1965 testings, Vocabulary section, Linguistic Capacity Index Form B.

Vocabulary Section, LCI Form B

EFF	DF	SS	MS	F
Levels	2	740.0	370.0	10.76**
Sex by levels	2	404.9	202.5	5.89**
Treatment by levels	2	68.2	34.1	0.99
Error	185	6373.8	34.4	

** Level of confidence .01

English language facility Level I made the most extensive language growth between October and May on the basis of scores on the Vocabulary section, LCI Form A. This superiority was probably due to the low ceiling on the test reducing the opportunities for pupils able to converse in English (Level III) to score higher. There was an interaction in the sex by levels analysis. Scores attained by the male population at Level I (little or no facility in English) were higher than those of the female population while the reverse was true for Level II language facility; females attaining higher mean gain scores than males.

Pupils in each of the levels categories performed similarly regardless of Treatment Group.

Table LXXIII indicates the analysis of variance on the basis of score gains between October, 1964 and May, 1965 testings, Phonology section, Linguistic Capacity Index Form B.

Phonology Section, LCI Form B

EFF	DF	SS	MS	F
Levels	2	60.6	30.3	1.19
Sex by levels	2	207.2	105.6	4.08*
Treatment by levels	2	17.5	8.7	0.34
Error	185	4701.6	25.4	

* Level of confidence .05

There were no significant score differences among pupils of the three levels of English language facility on the basis of the Phonology section of the LCI.

Males in English language facility groups I and III made greater progress in ability to differentiate among phonemes than did females; for language facility group II the females were superior. Treatment Group B pupils having little or no facility in English (Level I) were slightly superior to Treatment Group C pupils of comparable language facility. Treatment Group C pupils (Levels II and III) were slightly superior to the Treatment B group.

Table LXXIV indicates the analysis of variance on the basis of score gains between October, 1964 and May, 1965 testings, Syntax section, Linguistic Capacity Index Form B.

Syntax Section, LCI Form B

EFF	DF	SS	MS	F
Levels	2	36.2	18.1	0.49
Sex by levels	2	120.6	60.3	1.62
Treatment by levels	2	23.6	11.8	0.32
Error	185	6873.5	37.15	

English language facility group III was superior to both I and II on the basis of syntax knowledge.

English language facility group I males recorded higher mean gain scores than did females at the mean level of language competence. For Level II language facility there were no differences in score gains. Females of the Level III group recorded higher scores than did males in the same language category.

Treatment B pupils, Levels I and III, made greater gains in syntax knowledge than Treatment C pupils of comparable language ability.

Table LXXV indicates the analysis of variance on the basis of Total Score gains between October, 1964 and May, 1965 testings, Linguistic Capacity Index Form B.

Total Score, LCI Form B

EFF	DF	SS	MS	F
Levels	2	524.0	262.0	1.01
Sex by levels	2	1901.0	950.5	3.65*
Treatment by levels	2	334.0	167.0	0.64
Error	185	48170.0	260.38	

* Level of confidence .05

Level I language facility pupils made greater mean gains based on differences between October and May testings than did language Levels II and III.

Females in language facility groups I and III were superior to males based on total mean score gains.

Treatment Group C pupils, language facility groups I and III, were superior to Treatment Group B pupils in similar language categories.

Table LXXVI indicates the analysis of variance on the basis of score gains on the Vocabulary section, Phonemic Production Survey, between October, 1964 and May, 1965.

Vocabulary Section, PPS

EFF	DF	SS	MS	F
Levels	2	386.0	193.0	1.35
Sex by levels	2	159.0	79.5	.56
Treatment by levels	2	177.0	88.5	.62
Error	185	26418.0	142.8	

Level I English facility group pupils made slightly greater gains based on vocabulary score differences (October-May) than did pupils of Levels II and III.

Males of Treatment Group B were consistently superior to those of Treatment Group C.

Treatment Group B gain scores on this measure were superior to those of the Treatment C group.

Table LXXVII indicates the analysis of variance on the basis of score gains on pupil ability to produce consonant sounds without examiner assistance, Phonemic Production Survey, October, 1964-May, 1965.

Unstimulated Consonant Sounds, PPS

EFF	DF	SS	MS	F
Levels	2	207.0	103.5	.64
Sex by levels	2	44.0	22.0	.14
Treatments by levels	2	22.0	11.0	.07
Error	185	29756.0	160.8	

Differences in score achievements of the three language facility groups were slight.

Boys in all three categories of language facility made greater gains than did girls.

In general, Treatment Group B pupils in the three language categories made greater gains than the Treatment C group.

Table LXXVIII indicates the analysis of variance on the basis of score gains on pupil ability to produce consonant clusters without examiner assistance, Phonemic Production Survey, October-May.

Unstimulated Consonant Clusters, PPS

EFF	DF	SS	MS	F
Levels	2	26.8	13.4	.47
Sex by levels	2	110	55.0	1.92
Treatment by levels	2	14.3	7.1	.25
Error	185	5294.0	28.62	

Pupils in English language facility group II made greater progress in their ability to produce consonant clusters than did pupils of the other two language facility groups.

Boys in all three language facility groups made greater gains than did the girls.

Pupils in Treatment Group C language levels I and III made greater gains than did similar Treatment Group B pupils.

Table LXXIX indicates the analysis of variance on the basis of score gains on pupil ability to produce vowel sounds without examiner assistance, Phonemic Production Survey, October-May.

Unstimulated Vowel Sounds, PPS

EFF	DF	SS	MS	F
Levels	2	100.4	50.2	1.18
Sex by levels	2	53.5	26.7	.63
Treatment by levels	2	11.9	5.9	.14
Error	185	7871.8	42.6	

Pupils in English facility group II made greater gains on the ability to produce vowel sounds without examiner assistance than did pupils of facility groups I and III.

Girls in all three language facility groups made greater progress than did boys.

Except for language facility Level III pupils, Treatment Group C made greater gains than did Treatment Group B pupils.

Table LXXX indicates the analysis of variance on the basis of Total Score, pupil ability to produce phonemes (unstimulated), Phonemic Production Survey, October-May.

Total Score, Phonemes (unstimulated), PPS

EFF	DF	SS	MS	F
Levels	2	1770.0	885.0	1.46
Sex by levels	2	890.0	445.0	.73
Treatment by levels	2	20.0	10.0	.02
Error	185	112380.0	607.46	

Level I English facility pupils scored higher than did pupils of Levels II or III.

Boys in all three language facility groups made greater gains than did girls.

Except for language facility group III, Treatment Group B pupils made greater gains on unstimulated ability to produce phonemes than did pupils of Treatment Group C.

Table LXXXI indicates the analysis of variance on the basis of pupil gains between the October, 1964 - May, 1965 testings, ability to produce consonant sounds with examiner assistance, Phonemic Production Survey.

Consonant Sounds with Stimulation, PPS

EFF	DF	SS	MS	F
Levels	2	76.0	38.0	.20
Sex by levels	2	145.0	72.5	.38
Treatment by levels	2	105.0	52.5	.28
Error	185	35060.0	189.5	

Level II English facility group made greater gains on the ability to produce consonant sounds with examiner stimulus. This advantage, however, may in fact indicate that the Level II group made less phonemic growth since these scores represent achievements in mimicry rather than significant phonemic mastery of English sounds.

Girls of the Level I and II English facility groups were superior to the boys in ability to produce phonemes with stimulation. A contrast with Table LXXVII, however, indicates that the males were superior in unstimulated responses, a more significant factor in English language growth.

Treatment Group C was superior to the B group at all levels of English facility on the ability to produce phonemes with examiner assistance. Again, however, a contrast with Table LXXVII would indicate the superiority of the B group at all levels in the more significant skill of unstimulated consonant sound response.

Table LXXXII indicates the analysis of variance on the basis of pupil gains between the October, 1964 and May, 1965 testings, ability to produce consonant clusters with stimulation, Phonemic Production Survey.

Consonant Cluster Sounds with Stimulation, PPS

EFF	DF	SS	MS	F
Levels	2	1.8	.9	.03
Sex by levels	2	25.1	12.55	.37
Treatment by levels	2	28.1	14.05	.41
Error	185	6300.1	34.1	

Level II English language facility made greater gains than did Levels I or III on the ability to mimic consonant sounds. Males of the Level I group made slightly greater gains than did comparable males of Levels II or III, and males in all three language categories made greater growth in mimicry than did females. Similarly, females of the Level I English facility group made slightly greater gains than did the females of language facility groups II and III.

Except for English facility level III, Treatment Group B pupils made greater gains in ability to mimic consonant clusters than did Treatment Group C pupils.

Table LXXXIII indicates the analysis of variance on the basis of pupil gains between the October, 1964 and May, 1965 testings on the ability to produce vowel sounds with examiner assistance, Phonemic Production Survey.

Stimulated Vowel Sounds, PPS

EFF	DF	SS	MS	F
Levels	2	71.0	35.5	.78
Sex by levels	2	76.0	38.0	.83
Treatment by levels	2	37.8	18.9	.41
Error	185	8437.6	45.6	

English language facility level II made greater gains on the ability to mimic vowel sounds than did pupils of Levels I or III.

A possible explanation is that Level III pupils attempted the examination items and thus were not given an opportunity to mimic the sounds tested. Conversely, Level I pupils (little or no facility in English) failed the test items even when encouraged to mimic.

Except for language facility level I, boys made greater gains on the ability to mimic vowels than did girls. The Level II boys made the greatest achievement gains.

Treatment Group B language facility group II made the most extensive growth in the ability to mimic vowels.

Table LXXXIV indicates the analysis of variance on the basis of pupil gains between the October, 1964 and May, 1965 testings, phonemic production ability (stimulated and unstimulated), Phonemic Production Survey.

Total Score, Phonemic Production Survey

EFF	DF	SS	MS	F
Levels	2	330.0	165.0	2.85*
Sex by levels	2	760.0	380.0	6.56**
Treatment by levels	2	410.0	205.0	3.54*
Error	185	10720.0	57.9	

Levels of confidence ** .01
* .05

Level I English language facility group made the most extensive language growth on the basis of Phonemic Production Survey testing.

Boys in all three language facility groups made greater language growth than did girls.

Treatment Group B pupils in all three language categories made greatest score gains on the Phonemic Production Survey measurement following the experimental year.

CHAPTER VI

SUMMARY AND CONCLUSIONS

This study was conducted to evaluate the effectiveness of a linguistically designed program of English language development for kindergarten pupils whose primary language is Spanish.

There were three instructional emphases in the procedures of this research:

- Auditory discrimination and production of phonemes contrasted in English but not in Spanish;
- Development of pupil ability in the use of English grammar;
- Development of an English vocabulary adequate for first grade reading instruction.

Measurements were made on three populations, and the achievements of pupils were statistically analyzed.

Based on a review of the instructional procedures, measurements and analyses, the following conclusions may be drawn.

1. The phonology, syntax and vocabulary of English can be learned by Spanish language oriented kindergarten pupils through formal classroom procedures.
2. The major difficulties in improving the English language abilities of the Spanish surname pupil are in the area of classroom instructional practice rather than linguistic theoretical design.
3. Based on administrations of the Linguistic Capacity Index and Phonemic Production Survey, the most significant English language improvements in phonology and syntax were made by those kindergarten pupils of minimal English facility.

4. In general, boys with minimal English language abilities responded more significantly to phonological instruction than did girls.
5. Certain phoneme and syntactic structures respond more sensitively to direct instructional procedures than do others, suggesting greater emphasis on the comparative difficulty of linguistic elements in designing early grade foreign language programs.
6. Based on a Harris-Goodenough Intelligence measurement, the mean IQ of the total population was 84, significantly below the normal range.
7. Based on the results of Form A Linguistic Capacity Index, there were no significant language achievement differences between Treatments A and B.
8. Based on the results of the Metropolitan Readiness Tests, there were no significant differences in the achievements of the Treatment A and Treatment B populations.
9. Treatment Group C pupils were more facile in English sound production, syntax knowledge and vocabulary at kindergarten entrance than were pupils of Treatment Groups A and B.
10. Treatment Group C was superior to Treatment Groups A and B on all aspects of English sound production, syntax knowledge and vocabulary at the end of the experimental year.
11. Based on the experiences of administering both individual and group tests, group testing procedures are inappropriate for obtaining valid scores. Extreme difficulty was encountered in examining groups as small as ten pupils.
12. The relatively low scores on the Metropolitan measure are indicative of pupil inability to follow directions.

13. Linguistic analysis of the Metropolitan Readiness Tests (Form R) indicates that this measure is inappropriate for use in estimating English language growth.

14. Based on the results of the Phonemic Production Survey, a major obstacle in designing more efficient English language programs is the wide range of phoneme production abilities of beginning kindergarten Spanish-speaking pupils.

15. The irregular attendance patterns of pupils from culturally-disadvantaged homes seriously affects outcomes of educational programs designed to improve school achievements.

16. Family attitudes that school failure is an inevitable concomitant of school attendance is reflected in the low grade level education of Spanish-speaking parents. The fact that the average child involved in this research was the third of the family to attend school, prior school failures conditioned pupil attitudes.

17. The instructional problems of teaching English as a second language are complicated by the communication patterns of parent(s).

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Appendix A

FORWARD TO TEACHERS

English as a Foreign Language

Many thousands of the students entering elementary schools throughout the United States are learning English as a foreign language. The degree of language handicap exhibited by these non-English speaking students is sufficiently great to pose a serious problem to them in learning to read and in achieving and adjusting throughout their years of schooling in an English language medium. The readiness of these students to receive reading instruction in English can be accelerated through direct language teaching procedures.

Language deficiencies in young students can be identified, measured and corrected. A systematic program of instruction including sequential development of phonemic, syntactic and vocabulary skills will contribute to the success in total language development.

This language program prepared for pre-reading kindergarten students from Spanish language backgrounds is designed to teach the discrimination and production of all English phonemes, the interpretation and production of the basic sentence patterns of English, and a vocabulary adequate to the needs of classroom procedure and the understanding of beginning reading materials.

Teaching English Sounds

Learning the language sounds is an essential preliminary to learning the language itself. It is possible for a person learning a language to avoid troublesome words and constructions, but not phonemes or phonemic combinations. They should be under control early so they may become automatic. A child in his native language learns to distinguish those which give contrastive meanings to words, the phonemes, and to disregard or eliminate those which do not. A child growing in a Spanish-speaking household will distinguish sounds the English-speaker learns to ignore and disregard some sound differences vital to English word meanings. He will, for instance, hear "share" and "chair" as the same word.

The speech errors most commonly made by Spanish-speaking students learning English are the following:

1. /b/ and /v/ interchanged
2. /č/ and /š/ confused
3. /iy/ substituted for /i/
4. /s/, /f/, or /y/ substituted for /θ/
5. /z/, /v/, or /d/ substituted for /đ/
6. /k/ or /g/ added to /ŋ/
7. /k/ substituted for /g/
8. /t/ substituted for /d/
9. /s/ substituted for /z/
10. /f/ substituted for /v/
11. /u/ substituted for /uw/

12. /a/ substituted for /æ/, /ə/, and /ɔ/
13. /w/ substituted for /hw/
14. /ǰ/ substituted for /y/ in the initial position
15. Weak or absent final consonants
16. Lack of glide in vowels
17. Slight sentence stress

A teacher, in order to effectively teach the sounds of English, must develop an understanding concerning how the mechanism for speech works, how utterances may best be analyzed and described, and how the sound structure of English and that of the students' native language compare.

The first three units of this language program promote the discrimination of English phonemes. Phonemes are sounds which are in contrast to one another. The sounds /b/ and /v/ are English phonemes because they contrast in the words "base" and "vase," "cupboard" and "covered." The native speaker of Spanish must be taught to hear this contrast which does not exist in his language. The Spanish-speaking student will hear /b/ and /v/ as variants of the same phoneme. Other English phonemes are not contrastive in Spanish. These include /š/ and /č/, /a/ and /æ/, /s/ and /z/. The first step in teaching English to Spanish-speaking kindergarten students is to teach those English phonemes which do not contrast in the Spanish language.

First, the consonant sounds are presented and contrasted in their order of difficulty for the students. These comprise Units I and II, Lessons 1-40. Lessons 41-45 in Unit III introduce consonant clusters containing /s/ and /š/ in initial and final word positions. Lessons 46-60 in Unit III present and contrast the English vowel sounds in combinations most difficult for Spanish-speaking students to discriminate.

Sound discrimination and speech habits are developed through exercise, games, stories, songs and poems.

Teaching English Sentence Structure

Word order is of supreme importance in English. The structural framework is fixed through extensive practice with a limited number of words. A larger vocabulary can easily be added as required.

After the sounds of English are taught, lessons for the Spanish-speaking students are organized around the sequential presentation of English sentence structure. Vocabulary items are taught within these structural contexts. All of the sentence patterns presented in Units IV through VI are taught through functional drill using pattern practices in the form of games, songs, stories and poems.

Teaching English Vocabulary

The native English-speaking child entering school has a vocabulary adequate for his needs and it will increase substantially from year to year. The vocabulary of beginning books is well below the understanding and speaking level of most of the students. Weakness in understanding words, however, has been diagnosed as a major problem with children from foreign language backgrounds who have reading difficulty.

Young children understand much of what is being said before they start talking. This must also come first for children learning English as a second language. Even when the language is learned, some parts will remain relatively passive. Some words will be used for self-expression, some will be recognized and understood, but seldom or never used.

Since the vocabulary taught in one year of kindergarten instruction will of necessity be a small one, it is necessary that each word will be needed as a part of the students' active vocabulary in the near future. This will insure the repetition necessary for permanent acquisition.

A basic vocabulary of 191 words is presented within the sentence patterns of Units IV through VI. These words were selected for their immediate usefulness in classroom activities and their future usefulness in the content of beginning reading material. Additional words may be substituted in already learned sentence patterns as time and progress allow.

Instructional Aids

Extensive visual aids illustrate each lesson. These include pictures for flannel board stories, puppets and varied games. Pocket charts are constructed for pairs of contrastive phonemes so that the students can sort the pictures that contain the same and different sounds. Each vocabulary item is pictured on a large flash card and many on smaller flash cards for each child to use in group response and in independent drill. Several games have been constructed to give the students both group and individual practice in discriminating sounds and constructing English sentences. These are designed to provide additional motivation for the Spanish-speaking students to practice English.

Patterns for all of the instructional aids and directions for their preparation are to be found following each unit.

Class Organization

Instruction in the discrimination of English phonemes is to be given all kindergarten students, both Spanish and English-speaking. Beginning in approximately the third week of school, fifteen to twenty minutes a day should be devoted to this phase of language instruction. Some of the games, poems, finger plays and stories should be repeated on the playground, during story time, while waiting for the bus, or whenever a few moments are available during the day.

English sentence structure is presented in the second half of the kindergarten year. For this phase and for the vocabulary concepts developed through it, brief periods of direct teaching are devoted each day to just the Spanish-speaking students. Each lesson ends with one or more activities for the entire class which share the sentence patterns and vocabulary concepts learned by the Spanish-speaking group with the class in games, poems and stories.

Throughout the year the Spanish and English-speaking groups should participate in varied activities in the classroom and on the playground with constant opportunity to use the English being taught. This can be encouraged by arranging group membership so that Spanish-speaking students work and play with English-speaking students as much as possible.

The use of English should be encouraged in all phases of the kindergarten program, but under no circumstances should the Spanish-speaking students be forbidden to use their native language at school.

Scheduling Activities

The following time schedule is suggested for kindergarten classes of 150 minutes in which milk and rest are a part of the daily program:

Minutes	Activity
15	Opening (Flag salute, roll call, discussion)
45	Work Period
10	Toileting and Washing Hands
10	Milk
10	Rest
20	Language
10	Outdoor Play
20	Music and Rhythms
5	Story
5	Prepare for Dismissal

The following time schedule is suggested for kindergarten classes which follow a more formal reading readiness program and do not include milk or rest:

Minutes	Activity
15	Opening (Flag salute, roll call, discussion)
45	Work Period (reading readiness and craft activities)
10	Outdoor Play
20	Concept Development (arithmetic, social studies, science)
20	Music and Rhythms
10	P.E.
20	Language
5	Song or Story
5	Prepare for Dismissal

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Unit I

Lesson 1	Introduce /b/
Lesson 2	Introduce /v/
Lesson 3	Contrast /b/ and /v/
Lesson 4	Contrast /b/ and /v/
Lesson 5	Contrast /b/ and /v/
Lesson 6	Introduce /š/
Lesson 7	Introduce /č/
Lesson 8	Contrast /š/ and /č/
Lesson 9	Contrast /š/ and /č/
Lesson 10	Contrast /š/ and /č/
Lesson 11	Introduce /θ/
Lesson 12	Review /θ/
Lesson 13	Introduce /ð/
Lesson 14	Review /ð/
Lesson 15	Contrast /θ/ and /ð/
Lesson 16	Contrast /s/, /f/, /t/, and /θ/
Lesson 17	Contrast /z/, /v/, /d/, and /ð/
Lesson 18	Review /θ/ and /ð/
Lesson 19	Introduce /ʒ/
Lesson 20	Review /ʒ/

LESSON 4

Purpose: To contrast the sounds /b/ and /v/.

1. Practice saying minimal pairs with the children, using pictures whenever possible to illustrate the meaning of the words.

boat	vote
bat	vat
best	vest
berry	very
robe	rove
cupboard	covered
base	vase

2. Put pictures on the flannel board of both Bob and Virginia (1 and 3). Have pictures of several objects containing /b/ and several containing /v/. Children place under Bob all pictures containing /b/ and under Virginia all with /v/.

3. Tell the story of "The Blue Bonnet," using the flannel board and bonnets cut from all colors (6). The children take turns telling this story, too, and take the parts of the sales lady and Virginia.

Once upon a time there was a little girl named Virginia Brown. When Virginia went out to play she always wore a bonnet.

One day when she was playing hide and seek, she lost her beautiful bonnet.

Mother said, "We'd better go to the store so you can have a new bonnet." Virginia was very happy.

The lady in the store said, "What can I do to help you?"

Mother said, "My little girl would like to have a new bonnet."

The lady reached in a drawer and brought out a red bonnet. "Would you like to have this red bonnet, Virginia?"

Virginia said, "I don't want to have the red bonnet."

So the lady reached in the drawer and brought out another one. "Do you want to have this black bonnet, Virginia?"

Virginia: "I don't want to have the black bonnet."

Lady: "Do you want to have this green bonnet, Virginia?"

Virginia: "I don't want to have the green bonnet."

Lady: "Do you want to have this yellow bonnet, Virginia?"

Virginia: "I don't want to have the yellow bonnet."

Lady: "Do you want to have this brown bonnet, Virginia?"

Virginia: "I don't want to have the brown bonnet."

Lady: "Do you want to have this purple bonnet, Virginia?"

Virginia: "I don't want to have the purple bonnet."

Lady: "Do you want to have this orange bonnet, Virginia?"

Virginia: "I don't want to have the orange bonnet."

Lady: "There is one bonnet left. Do you want to have this blue bonnet, Virginia?"

Virginia: "Oh, dear, I don't want to have the blue bonnet, either. But I like it best."

Lady: "Maybe Virginia would like some decoration on the blue bonnet." (The lady went over to the jewelry counter for a few minutes, and when she came back she had a butterfly to pin on the blue bonnet.)

Virginia said, "Oh, that is the one I want to have! What a pretty blue bonnet with a butterfly on it!"

Virginia was very happy to have such a beautiful bonnet.

(Have the children take the bonnets from the board one at a time.)

Teacher: "Give me the brown bonnet, please," etc.
Child: "I have the brown bonnet," etc.

LESSON 5

Purpose: Contrast the sounds /b/ and /v/.

1. Have several pictures of food items such as ham, pie, veal loaf, cake, rolls, and biscuits (7). Each child will take a turn choosing a picture and saying, "My mother bakes _____ in her stove."

2. Have pictures or objects in a bag that contain /b/ or /v/ (4). One child reaches in and pulls one out. He can say, "I have _____ from the bag." The children take turns at this until all of the pictures or objects have been removed from the bag.

3. Eight children are given vases cut out of paper and stapled together (5). Each child has a different color. There is one picture containing /b/ or /v/ in each vase and duplicate pictures displayed for all the children to see (4). One child is "it" and asks, "Do you have a _____ in the blue vase?" If he guesses correctly, the child with the blue vase must sit down, and the one who is "it" may guess again. If he is wrong, he sits down and another child is "it."

4. Teach the nursery rhyme "Barber."

   Barber, barber, shave a pig.
   How many hairs will make a wig?
   "Four and twenty, that's enough."
   Give the barber a pinch of snuff.

LESSON 6

Purpose: To introduce the sound /š/, as in sheep.

1. Say the names of several pictures that contain /š/ in the initial, medial and final positions and have the children repeat them as the picture is shown.

   Suggested pictures (mounted on 9 x 12 paper):

   shell
   shoes
   sheep
   ship
   shirt
   fishing
   seashell
   machine
   cushion
   washing
   sash
   fish
   dish
   wash
   bush

2. Say several words slowly, about half of them containing /š/. The children clap or raise their hand when they hear /š/ in a word.

3. What am I? All answers begin with /š/.

   I am worn on your feet. (shoes)
   I am white and say "baa." (sheep)
   I sail in the water. (ship)
   I am something to wear. (shirt, shorts)
   I am a snail's home. (shell)

4. Teach the finger play "Open Them, Shut Them."

   Open them, shut them.
   Open them, shut them.
   Give a little clap.
   Open them, shut them.
   Open them, shut them.
   Lay them in your lap.

   Open them, shut them.
   Open them, shut them.
   To your shoulders fly.
   Like the little birdies
   Let them fly
   Up to the sky.

5. Have a number of colored objects (8). The child who is "it" says, "Show me red," or "Show me yellow." He calls on another child to show the color and be the next one "it."

6. Play the game "My Ship Sails."

   The children stand or sit in a circle. One child tosses a bean bag to another, saying, "My ship sails to _____." If the child to whom the ship sails catches the bean bag, he may be "it."

7. Use a set of toy dishes or pictures of them (9). The child sets a table with the dishes, naming each one as he puts it into place. He says, "This dish is a plate."

8. Sing this motion verse to the tune of "Mulberry Bush."

   Head, shoulders, knees, and toes; head, shoulders, knees, and toes;
   Head, shoulders, knees, and toes; we clap our hands together.

LESSON 7

Purpose: To introduce the sound /č/, as in cheese.

1. Say the names of several pictures that contain /č/ in the initial, medial and final positions and have the children repeat them as the picture is shown.

   Suggested pictures (mounted on 9 x 12 paper):

   cheese
   chicken
   children
   chair
   chipmunk
   watching
   catching
   teacher
   watch
   catch
   match
   sandwich
   church

2. Say several words slowly, about half of them containing /č/. The children clap or raise their hands when they hear /č/ in a word.

3. What am I? All answers begin with /č/.

   Mice like to eat me. (cheese)
   People sit on me. (chair)
   I like to eat corn and lay eggs. (chicken)
   I taste good in pies. (cherries)
   I am a flavor of ice cream. (chocolate)
   I lead an Indian tribe. (chief)

4. Teach this finger play.

   Here's the church,
   Here's the steeple.
   Open the door
   And see all the people.

5. Have pictures of food (10). The children take turns choosing something for lunch. "I choose _____ for my lunch."

6. The children join hands and go around in a circle, chanting:

   Charley over the water,
   Charley over the sea.
   Charley caught a chicken,
   But he can't catch me.

   When they say "me," they squat before "it" catches them.

7. Teach the finger play "Tom Tinker."

   Eye winker (touch eyelid)
   Tom Tinker (touch other eyelid)
   Nose smeller (touch nose)
   Mouth eater (touch lips)
   Chin chopper, chin chopper (wiggle chin so that jaws open and shut
   Chin chopper, chin. very slightly)

LESSON 8

Purpose: To contrast the sounds /š/ and /č/, as in share and chair.

1. Practice saying in rapid succession, /š č š č š č š č/.

2. Hold a feather before the mouth, and it will jump for /č/ but blow steadily for /š/ (16). Have the tongue tip rest, instead of pressing against the gum ridge. Let all of the children who have difficulty hearing the difference between /š/ and /č/ make this "feather test" so they can see it.

3. Say several words containing both /š/ and /č/. Children clap softly only when they hear /š/. Say the list again with the children clapping when they hear /č/.

4. Say minimal pairs, illustrated with pictures or actions whenever possible, and have the children repeat them. Then say one of each pair and have a child respond by pointing to the appropriate picture or making the correct action.

chair	share
choose	shoes
chew	shoe
watching	washing
chip	ship
cheep	sheep
catch	cash
match	mash
dish	ditch

5. Cut small shoes from colored paper (11). Put them in a box and have a child close his eyes and choose a shoe. He can guess its color as the other chant:

   New shoes, new shoes,
   Which color do you choose?

   If the child has the color he chose, he gets another turn. If not, he loses his turn to the next player.

LESSON 10

Purpose: To contrast the sounds /š/ and /č/.

1. Have a number of seashells, or pictures of them on a table (15). Let the children take turns getting a shell and putting it on a chair, saying, "I put my shell on the chair." One child chooses the next to take a turn by saying, "I choose ____." This could be played as a relay. Have two lines of children and see which line finishes first.

2. Teach the poem "Five Little Chickens" and have the children dramatize it or use finger puppets (17).

   Five little chickens sitting in the sun,
   The first chicken said, "My, let's run!"
   The second chicken said, "No, let's eat."
   The third chicken said, "I think I'll beat."
   The fourth chicken said, "I see a sheep."
   The fifth chicken said, "Cheep, cheep, cheep."
   They all ran away to the chicken pen
   To tell their mother, the big red hen.

   Then ask different children, "Which chicken will you choose?" The child can answer, " I shall choose the first little chicken."

3. Put pictures containing /š/ and /č/ face down on a table and let the children pretend to go shopping for these items (12). One child picks up a picture, shows it to the class and says, "I went shopping and bought a _____ (saying whatever is on the card)." He then chooses the next child to shop, saying, "I choose ______ to shop."

4. After all the pictures have been turned face up, children who did not have a turn shopping find one they like and say, "I choose the _______." They then tell the class something about it.

5. Give each child a feather to hold (16). Say in unison:

   I hold a feather to my mouth,
   It jumps for "ch, ch, ch,"
   But it doesn't jump at all
   When I say, "sh, sh, sh."

Unit I
Illustrations

1	**Bob and His Toys**	
	Back with flannel.	Lesson 1, No. 4 Lesson 4, No. 2
2	**Three Bear Puppets**	
	Cut out and staple to a tongue depresser.	Lesson 1, No. 5
3	**Virginia**	
	Back with flannel.	Lesson 2, No. 4 Lesson 4, No. 2
4	**Pictures Containing /b/ and /v/**	
	Cut out and mount on 3 x 6 tagboard.	Lesson 3, No. 3
	Cut out and put in paper bag.	Lesson 5, No. 2
	Paste in bases.	Lesson 5, No. 3
5	**Vase**	
	Cut several of blue, black and brown paper	Lesson 3, No. 4
	Cut two each of eight colors and staple together.	Lesson 5, No. 3
6	**Baby Bonnets**	
	Cut one each of eight colors and back with flannel.	Lesson 3, No. 6 Lesson 4, No. 3
7	**Food to Bake**	
	Back with flannel.	Lesson 5, No. 1
8	**Colored Objects**	
	Color the apple red, the flower blue, the kite yellow, the airplane black, the balloon green, the bear brown, the butterfly purple, and the boat orange.	Lesson 6, No. 5
9	**Dishes**	
	Cut out of tagboard.	Lesson 6, No. 7
10	**Food for Lunch**	
	Back with flannel.	Lesson 7, No. 5
11	**Shoes to Choose**	
	Cut several pairs from colored paper.	Lesson 8, No. 5

12	Pictures Containing /š/ and /č/	
	Cut out and mount on 3 x 6 tagboard.	Lesson 9, No. 1
	Cut out and mount on paper fish.	Lesson 9, No. 4
	Cut out and mount on small cards.	Lesson 10, No. 3
13	Matching	
	Back with flannel.	Lesson 9, No. 2
14	Wishing	
	Back with flannel.	Lesson 9, No. 3
15	Sea Shells	
	Cut several from colored paper.	Lesson 10, No. 1
16	Feathers	
	Cut several from colored paper.	Lesson 10, No. 5
17	Five Little Chickens	
	Cut from heavy yellow paper.	Lesson 10, No. 2
18	Pictures Containing /θ/	
	Cut out and attach one to each rung of a ladder. Make ladder of brown construction paper.	Lesson 12, No. 2
19	Mr. Bear's Party	
	Attach each picture to a tongue depresser.	Lesson 12, No. 3
20	This Duck Says	
	Attach nine ducks to tongue depressers.	Lesson 13, No. 4
	Use three of the same ducks.	Lesson 15, No. 2
21	This Little Cow	
	Attach five cows to tongue depressers.	Lesson 14, No. 7
22	Over in the Meadow	
	Back with flannel.	Lesson 14, No. 7
23	The Little Pigs	
	Attach pigs to tongue depresser.	Lesson 15, No. 4
24	Pictures Containing /s/, /f/, /t/ and /θ/	
	Cut out and attach one to each rung of a paper ladder.	Lesson 16, No. 4
	Cut out and put in a paper bag.	Lesson 18, No. 4
25	Tommy Toothbrush	
	Cut three from tagboard and attach to tongue depressers.	Lesson 16, No. 5

26 Pictures Containing /z/, /v/, /d/ and /ð/
Cut out and attach one to each rung of a paper ladder.
Lesson 17, No. 4
Lesson 18, No. 2

27 Thoughts
Back with flannel.
Lesson 18, No. 3

28 Food
Back with flannel.
Lesson 20, No. 2

29 Angry Little Monkeys
Attach four monkeys and the tiger to tongue depressers.
Lesson 20, No. 3

You also need:

Bean bag	Lesson 6, No. 6
Feather	Lesson 8, No. 2
Magnet and "Fishing pole"	Lesson 9, No. 4
Thimble	Lesson 11, No. 5 Lesson 12, No. 4 Lesson 15, No. 5
Spools of colored thread	Lesson 12, No. 5
Varied small objects	Lesson 15, No. 3 Lesson 18, No. 4
Eight different colored circles stapled to tongue depressers.	Lesson 17, No. 5

UNIT II

Lesson 21	Introduce /s/
Lesson 22	Introduce /z/
Lesson 23	Contrast /s/ and /z/
Lesson 24	Contrast /s/ and /z/
Lesson 25	Contrast /w/ and /v/
Lesson 26	Introduce /f/
Lesson 27	Contrast /f/ and /v/
Lesson 28	Contrast /f/ and /v/
Lesson 29	Introduce /y/
Lesson 30	Contrast /y/ and /ǰ/
Lesson 31	Introduce /t/
Lesson 32	Introduce /d/
Lesson 33	Contrast /t/ and /d/
Lesson 34	Introduce /k/
Lesson 35	Introduce /g/
Lesson 36	Contrast /k/ and /g/
Lesson 37	Contrast /k/ and /g/
Lesson 38	Introduce /p/
Lesson 39	Contrast /p/ and /b/
Lesson 40	Contrast /p/ and /b/

LESSON 30

Purpose: To contrast the sounds /y/ and /ǰ/, as in yellow and Jello.

1. Say these words that contain /y/ and /ǰ/ and have the children play an echo game and repeat them after you.

   yellow
   Jello
   yell
   jam
   jump
   year
   jail
   yarn
   you
   giraffe
   yet
   jet

2. What am I? All answers contain /ǰ/.

   I live at the zoo. I have a long neck. (giraffe)
   Children like to jump with me. (jump rope)
   I am at the beginning of a train. (engine)
   Birds live in me. (bird cage)
   I am chocolate candy. (fudge)
   I am a pumpkin with a face. (jack-o'-lantern)
   I am good to eat with bread and butter. (jam)

3. Recite this poem with the children joining on all lines saying, "Jump, jump, jump."

   See my rope so yellow;
   Jump, jump, jump.
   I'm a lively fellow;
   Jump, jump, jump.

   See me jump this way,
   See me jump that;
   See me jump over
   My brother's hat.

   See my rope so yellow;
   Jump, jump, jump.
   I'm a lively fellow;
   Jump, jump, jump.

4. Have pictures of an orange, yarn, engine, jump rope, and giraffe (43). The teacher should start the game. She has the pictures hidden behind her and brings them out one by one. As she does, she says, "Who has the ______?" The whole class says, "You, you, you," as a chant. She then chooses a child to be "it" and joins the class in saying, "You, you you."

5. Teach the following nursery rhymes:

   Jack Be Nimble
   Jack and Jill
   Two Little Blackbirds

Unit III

Lesson 41	Initial clusters containing /s/
Lesson 42	Initial clusters containing /s/
Lesson 43	Final clusters containing /s/
Lesson 44	Final clusters containing /s/
Lesson 45	Clusters containing /š/
Lesson 46	Introduce /ə/
Lesson 47	Contrast /a/ and /ə/
Lesson 48	Contrast /ə/ and /e/
Lesson 49	Introduce /æ/
Lesson 50	Contrast /a/ and /æ/
Lesson 51	Contrast /i/ and /e/
Lesson 52	Contrast /i/ and /iy/
Lesson 53	Contrast /e/ and /iy/
Lesson 54	Contrast /e/ and /æ/
Lesson 55	Contrast /ey/ and /e/
Lesson 56	Contrast /a/ and /ɔ/
Lesson 57	Contrast /o/ and /ɔ/
Lesson 58	Contrast /o/ and /uw/
Lesson 59	Contrast /a/ and /u/
Lesson 60	Contrast /u/ and /uw/

LESSON 52

Purpose: To contrast the sounds /i/ and /iy/, as in pit and Pete.

1. Say these words that contain /i/ and /iy/ and have the children play the echo game and repeat them after you.

pig
sea
jig
he
pick
week
fish
weed
dig
eat
tick
meat
wind
heat
big
fee
rig
three
sit
feet
lick

2. Let the children hear and feel the difference between /i/ and /iy/ by repeating these minimal pairs:

pit -- Pete
pick -- peak
fist -- feast
fit -- feet
lick -- leak
bin -- bean
hit -- heat
mitt -- meat
tick -- teak
sit -- seat
bit -- beat
nit -- neat

3. Read the following couplets. The children fill in the final word of each.

Put a hole in a kettle, and it will leak;
Hide a present and we all want to _____. (peek)

When you buy some shoes they should fit your feet;
When you run a race, you like to _____. (beat)

Buy a hat, and it must fit;
To play baseball, you need a _____. (mitt)

4. Have the children suggest words that rhyme with these:

feet _____ _____
pick _____ _____
mitt _____ _____
fish _____ _____
pig _____ _____
seat _____ _____
week _____ _____
green _____ _____

5. Make a chart with two pockets and several 3 x 6 flash cards of pictures containing /i/ and /iy/ (71). A minimal pair, such as mitt and meat, should be pasted over the pockets. The children sort the flash cards into the appropriate pockets.

6. Show one of the flash cards to each child and have him say what he sees, as, "I see a pig," " I see a mitt," etc.

7. Tell the story of "The Three Little Pigs."

8. Review:

"The Little Pigs" (Lesson 15, No. 4)
"The Seasons" (Lesson 21, No. 6)

Unit IV

	Sentence Patterns	Vocabulary
Lesson 61	A _____.	a an airplane bunny hat kitten cowboy pony
Lesson 62	This is a _____.	this that
Lesson 63	Is this a _____? Yes, that is a _____.	yes
Lesson 64	It is a _____.	it
Lesson 65	Yes, it is. No, it isn't.	no
Lesson 66	(Plural of count nouns.)	
Lesson 67	These/those are _____s.	these those are
Lesson 68	They are _____s. Are they _____s?	they
Lesson 69	I _____.	I we you he she am
Lesson 70	No, it is not a _____. He's not. He isn't.	not
Lesson 71	This is a _____ _____.	big little fast house

Lesson 72	See this _____.	see
Lesson 73	See this _____ _____.	
Lesson 74	This is the _____.	the
Lesson 75	This _____ is _____'. Is this _____ _____?	
Lesson 76	The _____ is on the _____.	in on box
Lesson 77	The _____ and the _____ are in the _____.	and
Lesson 78	Where is the _____?	where
Lesson 79	There is a _____ on the _____.	
Lesson 80		apple ball chair cake tree truck wagon train

LESSON 76

Purpose: To teach the use of a prepositional phrase after a form of "be" and to add two prepositions (in, on) and a count noun (box) to the vocabulary.

1. Have pictures or objects of a pony, hat, kitten, bunny, book, and airplane and a box large enough to hold each. Put the airplane in the box and say, "The airplane is in the box." Have the children echo this. Then put the airplane on the box and say, "The airplane is on the box." Have the children echo this, also. Repeat this procedure and the statements with each item.

2. Let the children take turns manipulating the objects or pictures, putting them in and on the box as they say, "The _____ is in/on the box," for each.

3. Show 9 x 12 pictures illustrating a bunny on an airplane (116), a cowboy on a pony (117), and a kitten on a house (118). Describe each in the form, "The bunny is on the airplane," and have the children repeat the descriptions.

4. Add the plural form with more pictures to describe bunnies on airplanes (119), cowboys on ponies (120), and kittens on houses (121).

5. Pass out a work paper illustrating objects in and on boxes (122). Have the children mark the objects described, such as, "The bunnies are in the box. The bunny is on the box."

For the entire class:

6. Place a variety of objects in a box. The children take turns choosing an item from the box as they say, "A _____ is in the box." They put the object anywhere in the room and describe its location (on the table, under the desk, behind the piano).

LESSON 77

Purpose: To add "and" to join adjective, count nouns with "a"/"an"/ "the," and prepositional phrases.

1. Use the pictures or objects and the box introduced in Lesson 76, No. 1. Put more than one in or on the box at a time and describe. "The _____ and the _____ are in the box. A _____ and an _____ are on the box."

2. Say, "The kitten and the bunny are on the box," and choose one child to move the objects or pictures so that they match the description. Repeat with different words and children.

3. Let the children again take turns manipulating the objects or pictures and describing their positions.

4. Add adjectives to the form in the descriptions of 9 x 12 pictures. Use such sentences as, "The big _____ and the little _____ are in the house (123). The cowboy and the kitten are on the pony" (124).

5. Ask questions about the pictures. "Are the cowboy and the kitten in the airplane?" Individual children respond, "Yes, they are," or with a correct description of the picture.

For the entire class:

6. Again put a variety of objects in a box. This time the children take turns choosing two items each. They say, "A _____ and a _____ are in the box." They place the objects around the room and describe their locations.

Unit V

	Sentence Patterns	Vocabulary
Lesson 81	This _____ is mine.	mine yours his hers
Lesson 82	Their _____ is _____. Theirs is _____.	its their theirs ours red yellow blue green
Lesson 83	My _____ is _____.	my your his her orange purple brown black
Lesson 84	Our _____s are _____.	our
Lesson 85	This is John's _____. The _____ is John's.	
Lesson 86	The kitten is _____-ing. The kitten _____s. _____, Maria.	run jump
Lesson 87		sit eat
Lesson 88	The _____ has been _____-ing.	sleep walk has
Lesson 89	The _____ have been _____-ing.	have
Lesson 90		come go

Lesson 91	I want _____.	want take ride
Lesson 92	See _____.	see hear
Lesson 93	Has he been _____-ing?	been
Lesson 94	The _____ is not _____-ing.	
Lesson 95		goat bear dog duck pet
Lesson 96		splash
Lesson 97	Does the kitten _____?	does farm bee
Lesson 98	Do kittens _____?	do don't get stop put
Lesson 99		come here get up sit down
Lesson 100	The _____ is _____ the box.	under down up into out of

LESSON 81

Purpose: To introduce "mine," "yours," "his," and "hers."

1. Show pictures or objects that illustrate count nouns presented in previous lessons, such as airplane, bunny, hat, kitten, cowboy, pony, box, apple, ball, truck, or chair. Show each to the class as you say, "This _____ is mine," and then hand it to one child in the group, saying, "This _____ is yours."
2. After each child in the group has a picture or object, point to each in turn and say, "The _____ is his/hers."
3. Each child stands before the group and says, "The _____ is mine," and then points to another child and says, "The _____ is his/hers."
4. All of the children hide their pictures or objects behind them and the teacher guesses, "Manuel, is the _____ yours?" Manuel answers, "Yes, the _____ is mine," or "No, the _____ isn't mine." Manuel then comes to the front of the class and guesses what another child has.
5. The children return the pictures or objects to the teacher and say as they do, "It is mine; it is yours."

For the entire class:

6. Prepare a boy and a girl cutout for the flannel board and several items of clothing to go with each (142). Show a coat, shoes, etc., to the children and ask, "Is this his (hers)?" A child answers, "Yes, it is his," or "No, it is hers," and places the item on or near the boy or girl cutout. That child then chooses another article of clothing and asks the other children, "Is this his (hers)?"

LESSON 85

Purpose: To introduce the possessive form of nouns.

1. Pass out pictures to the group as you say, "This is John's _____; this is Mary's _____." Have the children repeat these sentences.
2. Describe two or three of the pictures. "John's _____ is _____." Have the children describe the rest of the pictures.
3. Describe the pictures again, this time saying, "The (red) (apple) is John's."
4. Put a picture of a kitten on the flannel board and place different colored hats on its head (149). The children should take turns saying, "The kitten's hat is _____."
5. Put a second kitten beside the first and place hats on both. The children should now say, "The kittens' hats are _____ and _____."
6. Replace the second kitten with a smaller one. The children should now say, "The big kitten's hat is _____," and/or "The little kitten's hat is _____."

For the entire class:

7. Each child may choose one thing to hold, such as a book, a block, or a crayon. Choose one child, and say, "Joe's (book) is (red)." Joe then stands and describes something someone else is holding, as, "Mary's (crayon) is (blue)." Mary would then stand and the game would continue until each child had a turn. If the group is too large, it may be divided to sustain interest.
8. Tell the story of "The Lost Hat."

One day Cowboy Bill lost his hat. It was his big brown hat. His friend Sam helped him look for it.

Sam looked in the house. He looked in the barn. He could not find it.

He met John. He asked him, "Have you seen Cowboy Bill's hat?"

John said, "No, I haven't seen Cowboy Bill's hat."

He met _____ (use the names of several children in the class). "Have you seen Cowboy Bill's hat?"

Each child asked answers, "No, I haven't seen Cowboy Bill's hat."

Cowboy Bill and Sam couldn't look any more. They had to go to town. They had to saddle their horses and get started. Cowboy Bill went to his horse's stall and opened the door to lead him out. Surprise! Guess what was on the floor of the stall! Yes, Cowboy Bill's hat. It was found at last.

Unit VI

	Sentence Patterns	Vocabulary
Lesson 101	The _____ is going to _____.	
Lesson 102	Is this a _____ or a _____?	mother father boy girl baby or but
Lesson 103	How many _____ are there?	how many one two three four five six seven eight nine ten
Lesson 104	This is a _____ _____.	happy sad new old cold hot
Lesson 105	Who has the _____? What does _____ have?	who what color
Lesson 106		balloon toy party candle cake birthday

Lesson 107	_____ jumped.	jumped sat ate slept walked came went
Lesson 108	The _____ can _____.	can work help play hide
Lesson 109		will may could
Lesson 110	This pony runs _____.	fast slowly quietly noisily
Lesson 111	Give _____ kitten _____.	some each any many
Lesson 112	Here is a _____. Go away. _____ is across the _____.	here there away across paper
Lesson 113	Did I give Father _____? Did I give _____ to Father?	
Lesson 114		every no
Lesson 115	This is much _____.	water rain fire much little

Lesson 116		paint plant laugh race sing
Lesson 117	He wants to _____.	to
Lesson 118		turkey mouse hen wheat
Lesson 119		dress pocket button shoe coat mitten
Lesson 120		store bread money eggs corn

LESSON 107

Purpose: To introduce the simple past with question and negative patterns.

1. Tell one child to jump. Then say, "_____ jumped." Repeat with other children and sit (sat), eat (ate), sleep (slept), walk (walked), come (came), and go (went).

2. Again tell one child to jump. Ask, "Did _____ run?" Answer as group, "No, _____ did not run, _____ jumped." Repeat with other children and sit, eat, sleep, walk, come, and go.

3. One child performs any action he wishes. He then asks, "Did I _____?" The group or an individual answers, "Yes, you _____," or, "No, you _____."

For the entire class:

4. Have one child hide his eyes or leave the room briefly while a second child performs some action in front of the class. The child who is "it" asks the class, "Did he _____?" The class answers, "Yes, he _____," or "No, he didn't _____." After three incorrect guesses the class tells "it" the answer and another child is chosen to continue the game.

LESSON 111

Purpose: To add "give," "some," "each," "any," and "many," and introduce direct and indirect objects.

1. Show pictures to illustrate the following sentences (198, 199, and 200). Have the children repeat them after you.

This is a bunny.	This is a kitten.	This is an apple.
These are some bunnies.	These are some kittens.	These are some apples.
These are many bunnies.	These are many kittens.	These are many apples.

2. Cut out small pictures of many bunnies, kittens, and apples and place them on a flannel board. Take one or more pictures from the flannel board and say, "I have a/some/many ______." Replace the pictures and give each child a chance to take pictures and describe what he has. He may say, "I have a bunny and some apples."

3. Leave only the kittens on the flannel board and cut out a hat (201) and ball (202) for each one. Give a direction and have the class repeat the sentences after you.

   Give each kitten a ball.
   Give some kittens hats.
   Give any kitten a hat.
   Give any kittens balls.
   Give many kittens hats.

   One child follows each direction and says, "I'll give each kitten a ball," etc.

For the entire class:

4. Give each child a piece of paper with many balls outlined on it (203) and crayons. Have the children follow directions similar to the following. The teacher should demonstrate each direction for children who don't understand.

   Color any ball green.
   Color some balls red.
   Outline each ball with black.
   Draw a circle around some balls.
   Put an X on each ball.

   This activity should be repeated using a chart, chalk board, or other work papers. Other pictures may be used.

Appendix B_1

Directions for Administration
Linguistic Capacity Index Form A

Vocabulary Section

Sample: Mark the cowboy.
Mark the airplane.

1. Mark the she.
2. they.
3. mitten.
4. candle.
5. pocket.
6. farm.
7. bee.
8. jump.
9. splash.
10. run.
11. ride.
12. hide.
13. across.
14. around.
15. down.
16. away.
17. little.
18. fast.
19. big.
20. happy.
21. cold.
22. under.
23. he.
24. in.
25. on.

Phonology Section

Sample: Mark the tree.
Mark the duck.

1. Mark the sing.
2. mouse.
3. lather.
4. peg.
5. cupboard.
6. pill.
7. peel.
8. mouth.
9. covered.
10. bus.
11. chew.
12. pig.
13. cup.
14. fan.
15. ladder.
16. sink.
17. buzz.
18. fawn.
19. cap.
20. shoe.

Grammar Section

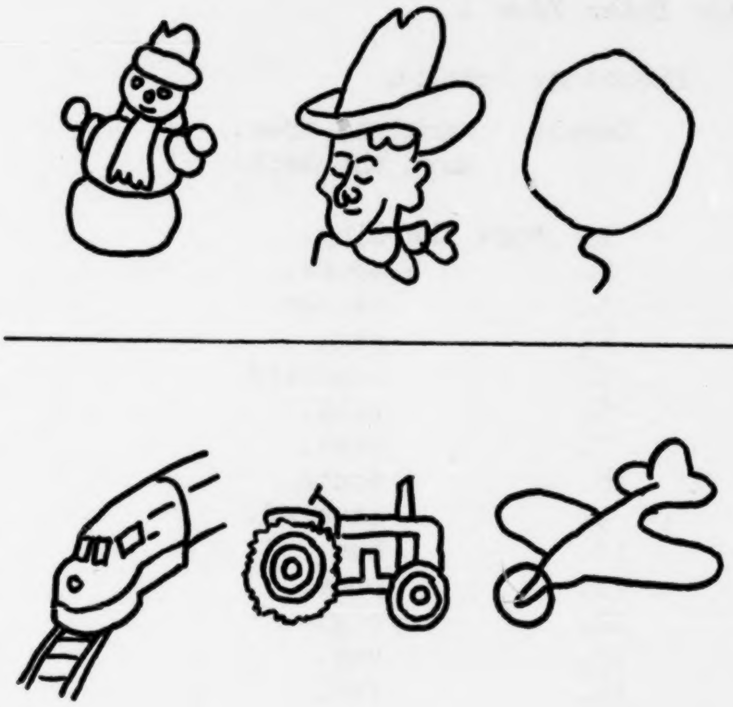
1. Mark the boy who is painting.
2. Mark the dog that has eaten.
3. boy who likes the dog.
4. bird that can't fly away.
5. dog that is going to eat.
6. animal that doesn't bark.
7. boy who is giving his mother a book.
8. boy who is going to jump.
9. boy who is opening the door.
10. boy who has more blocks.
11. rabbit that is painting.
12. boy who has more paints.
13. boy who is cold.
14. rabbit that is painted.
15. Draw a circle around some dogs.
16. each chair.
17. all the apples.

LINQUISTIC CAPACITY INDEX- FORM·A

VOCABULARY SECTION

Appendix B_1

FREDRICK BRENGELMAN
JOHN C. MANNING



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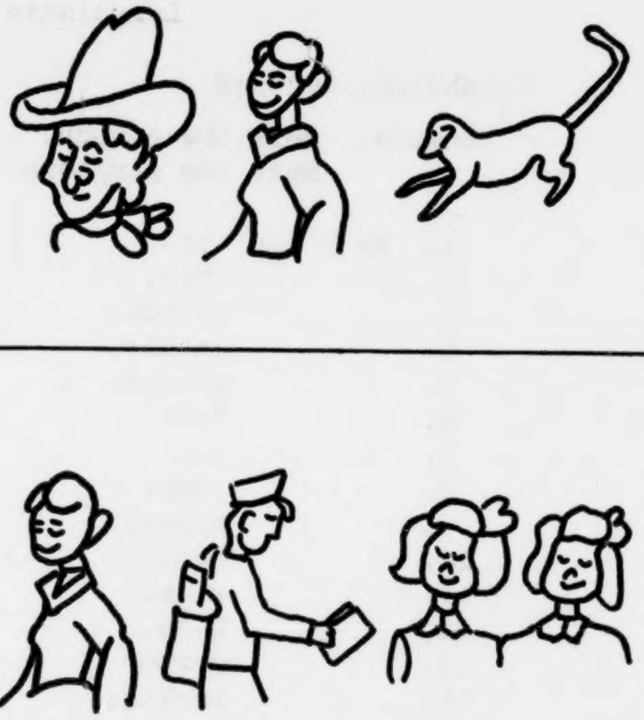

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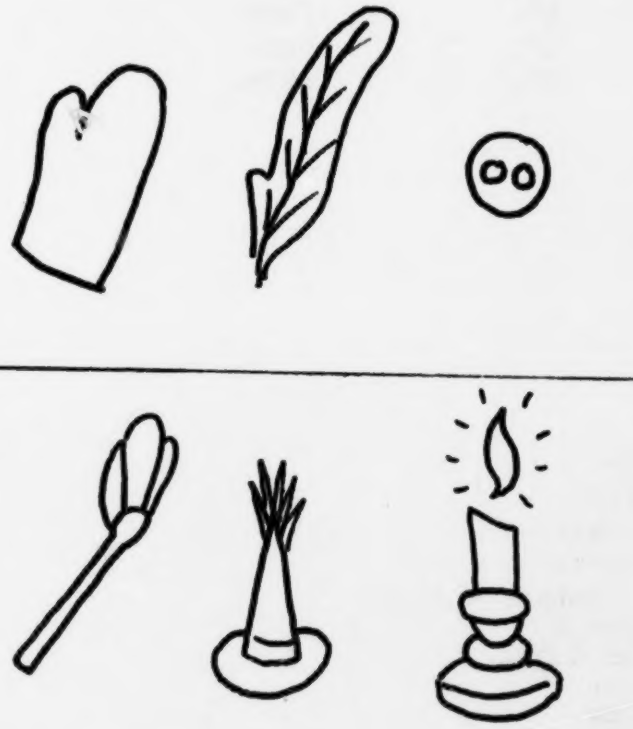

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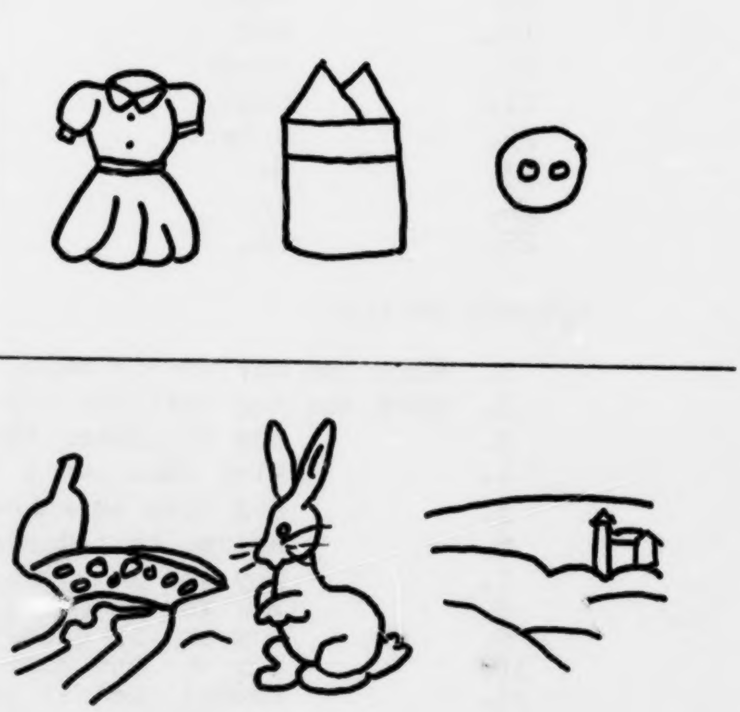

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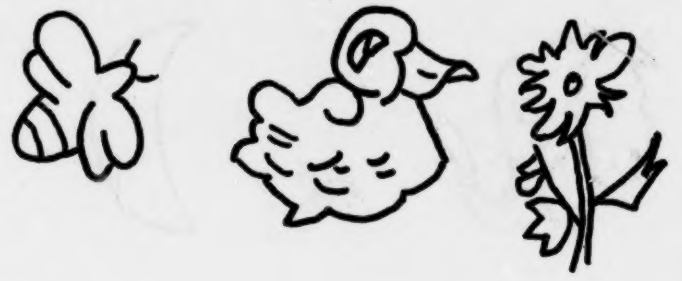

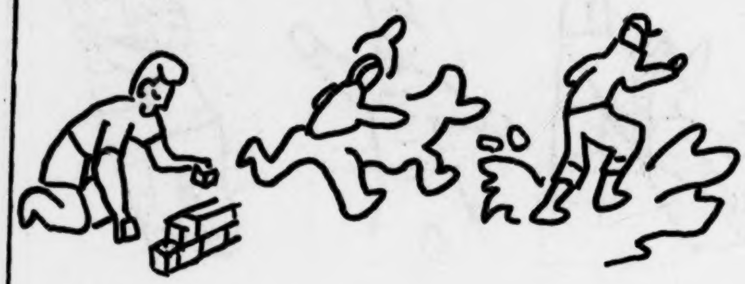

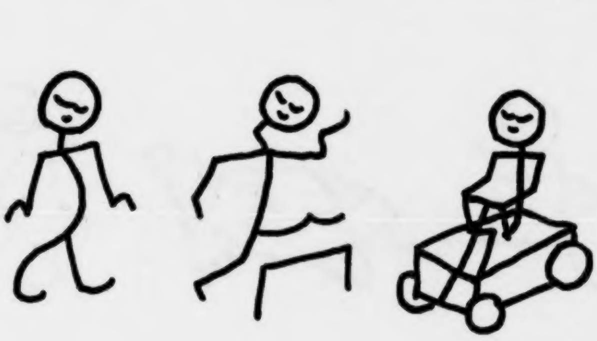

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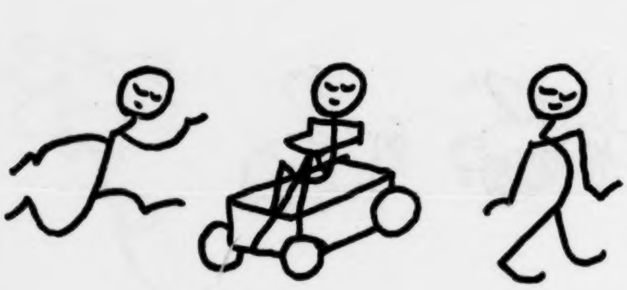

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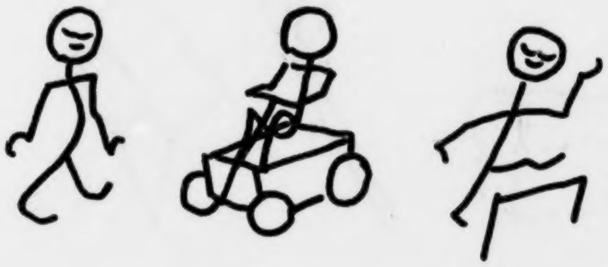

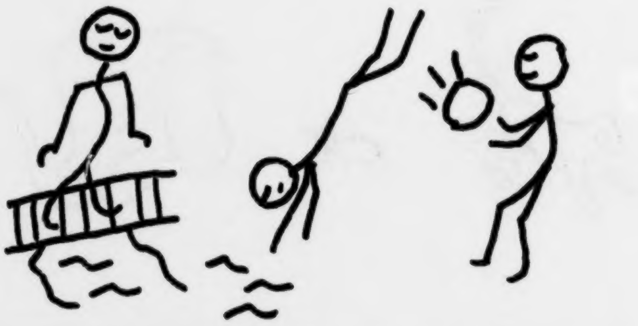

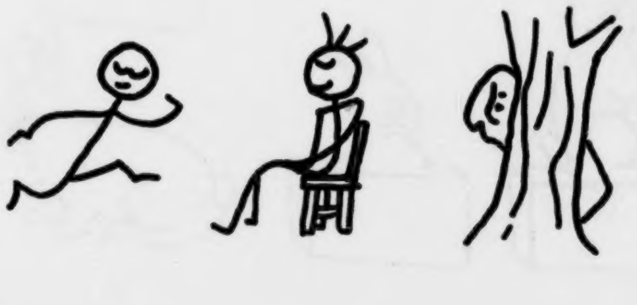

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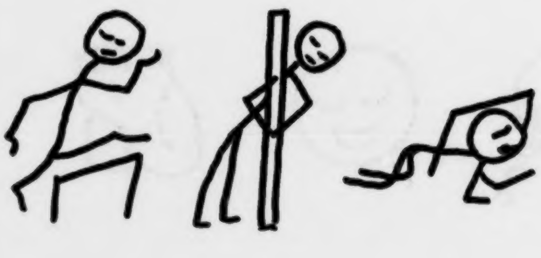

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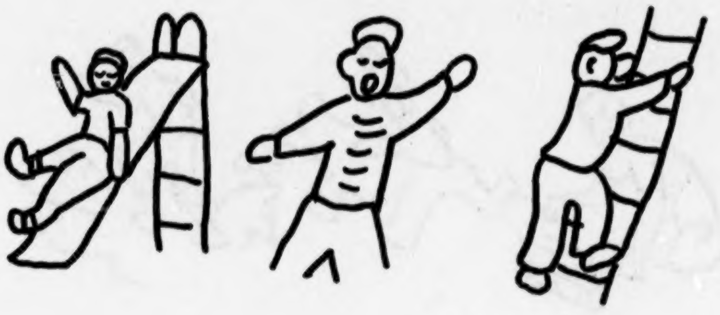

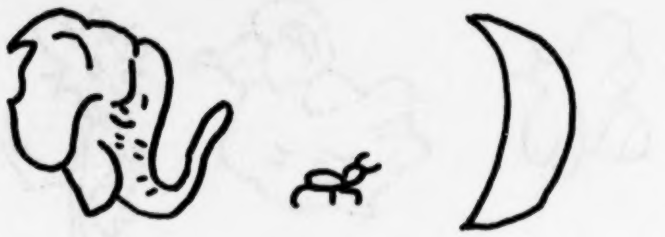

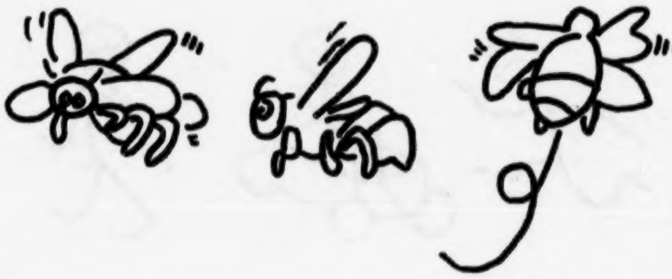

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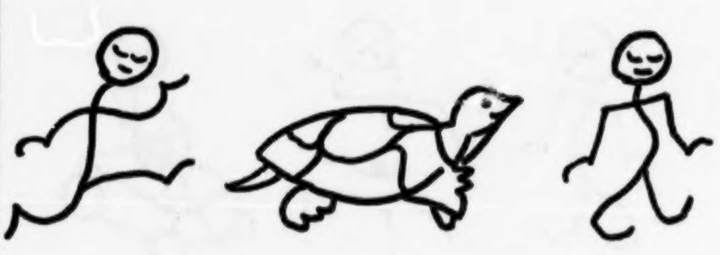

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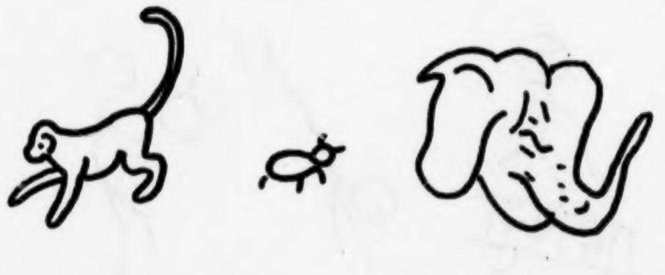

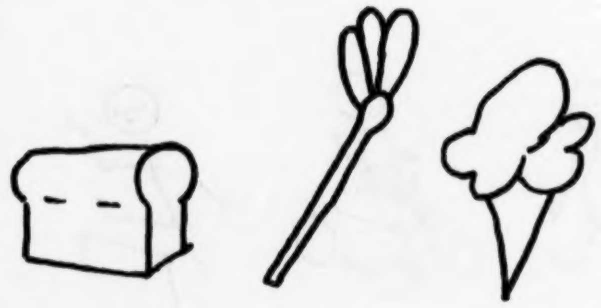

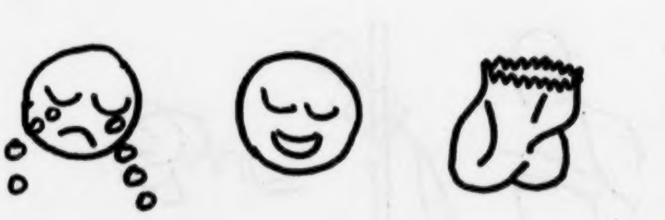

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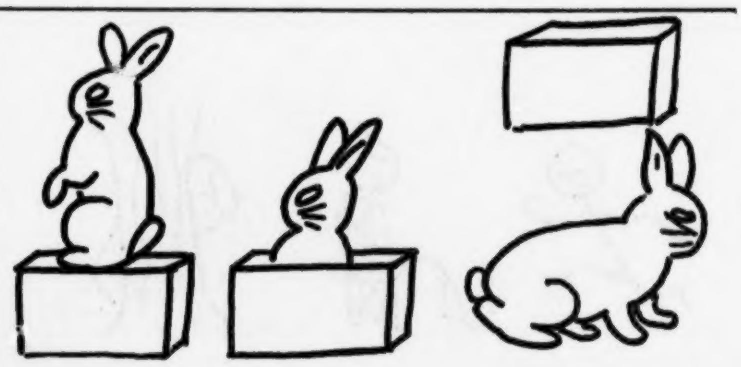

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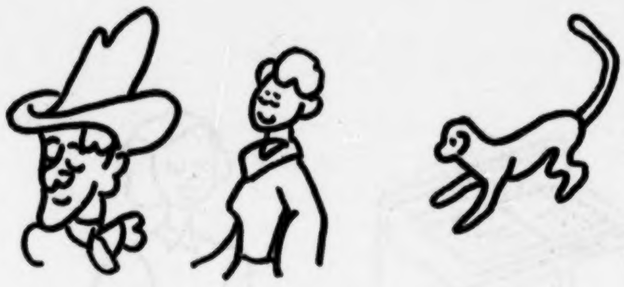

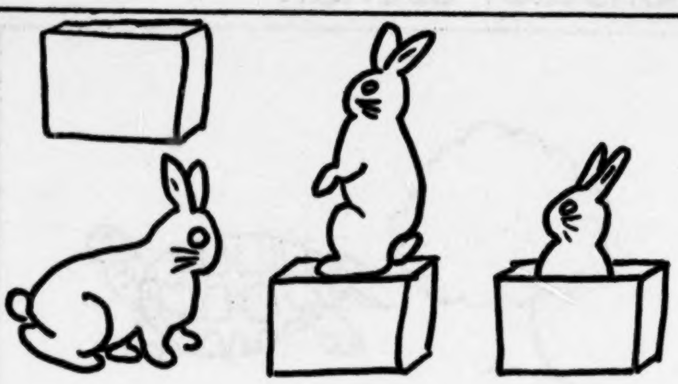

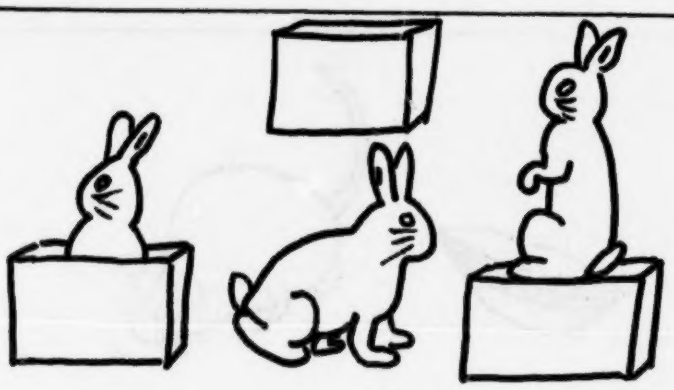

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LINQUISTIC CAPACITY INDEX-FORM·A

PHONOLOGY SECTION

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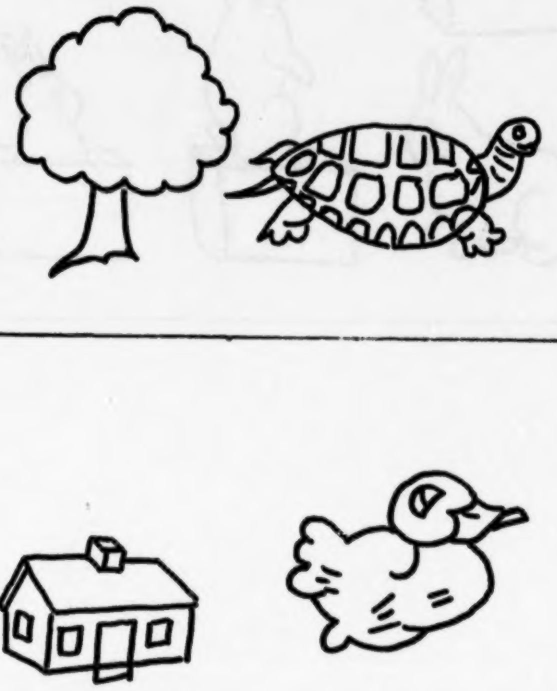

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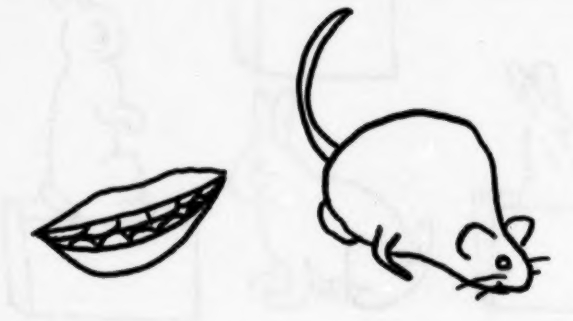

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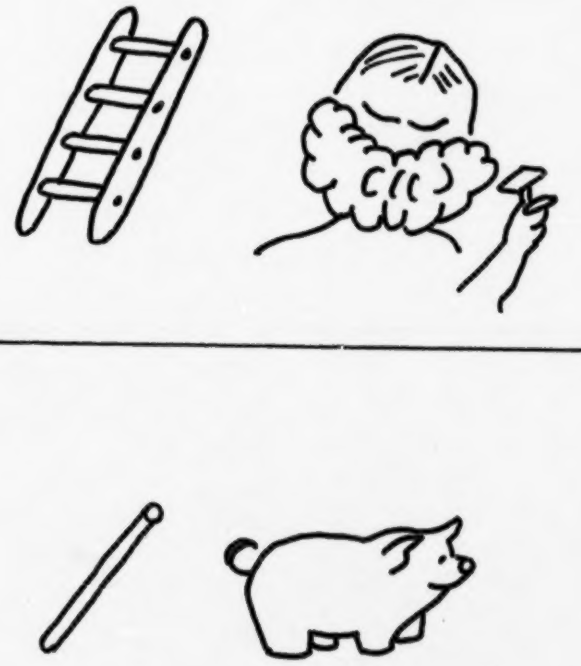

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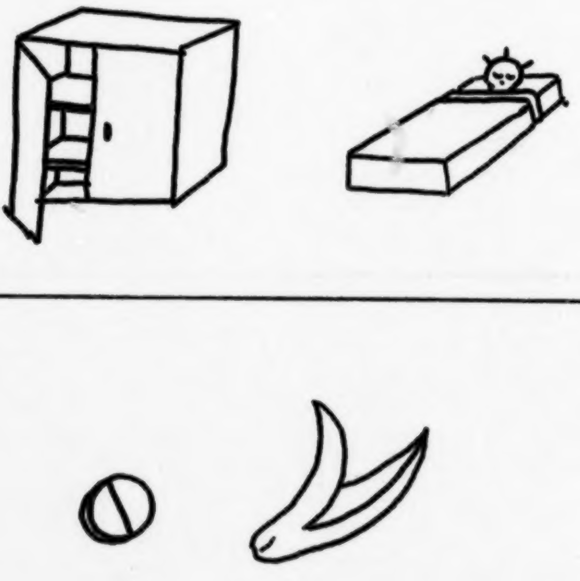

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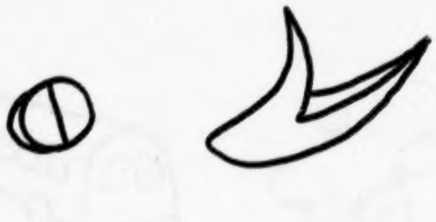

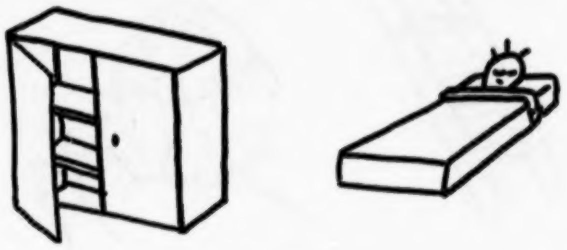

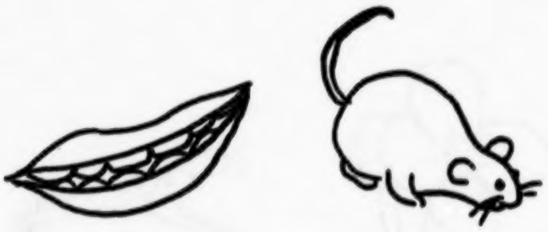

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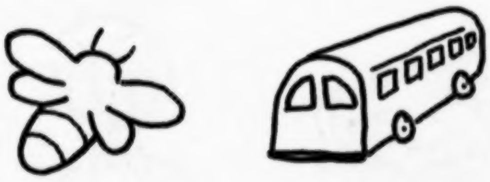

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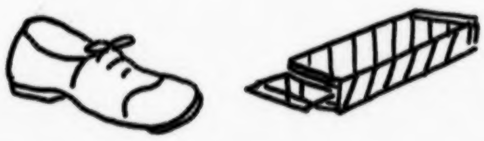

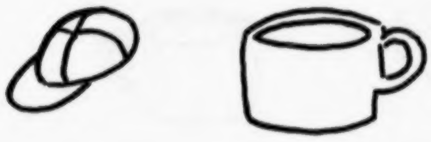

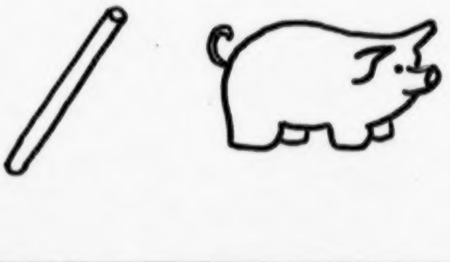

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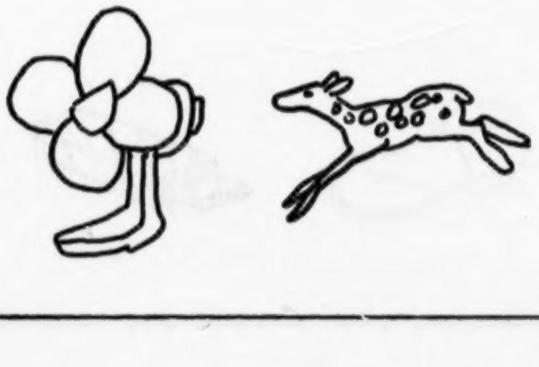

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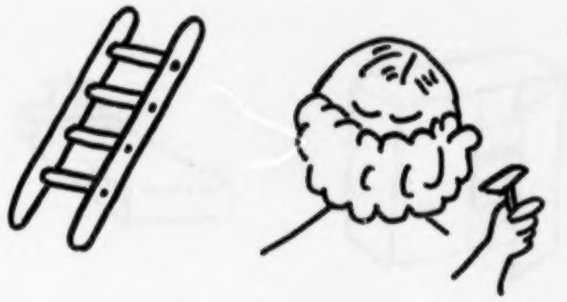

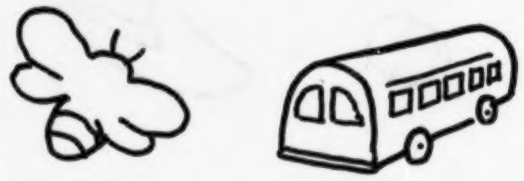

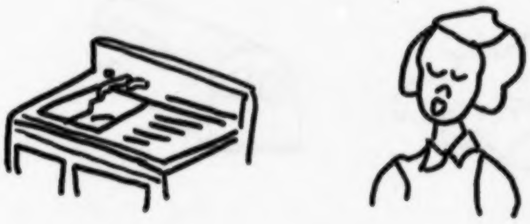

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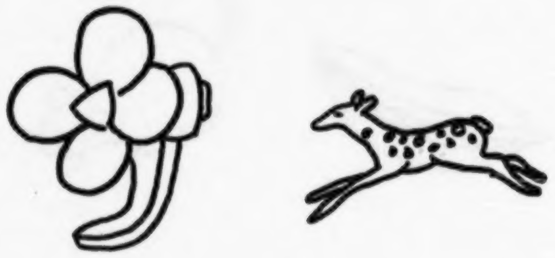

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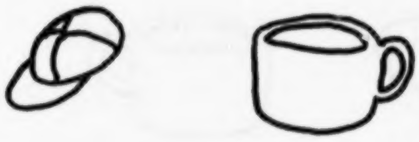

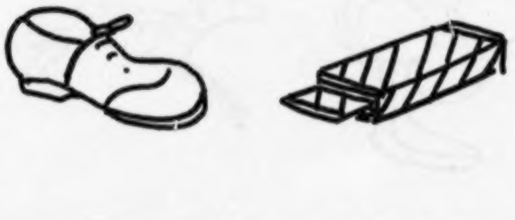

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LINQUISTIC CAPACITY INDEX-FORM·A

GRAMMAR SECTION

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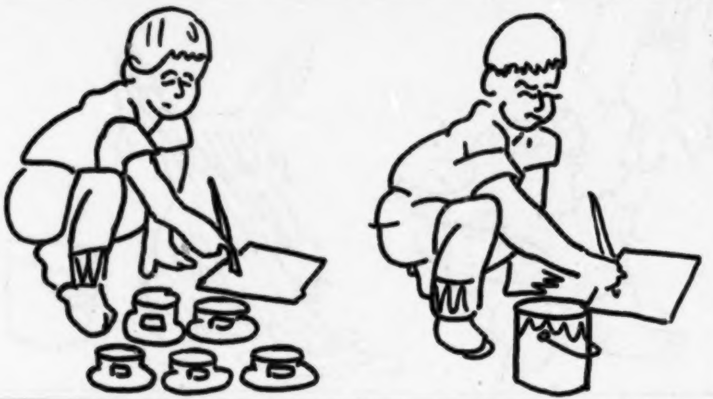

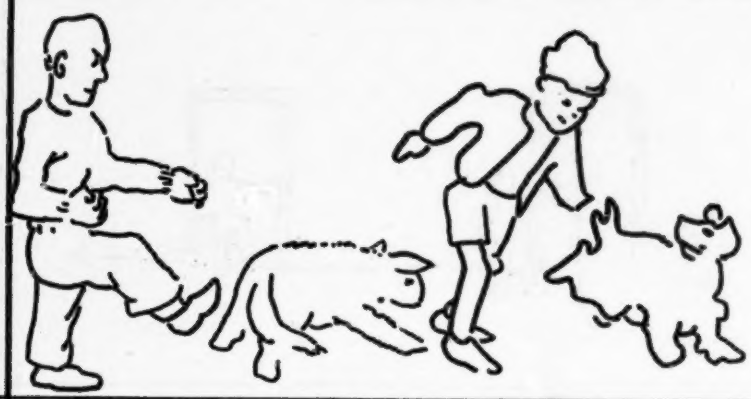

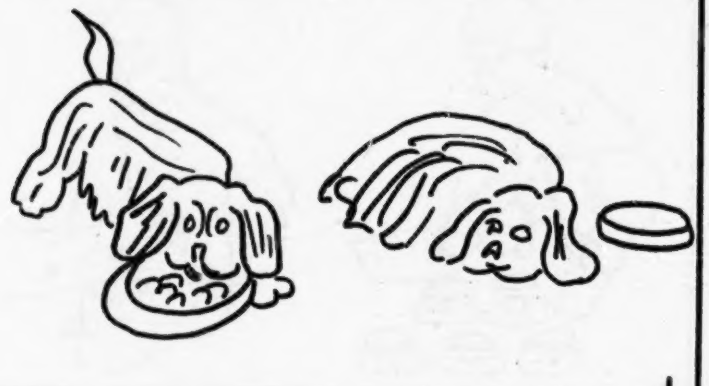

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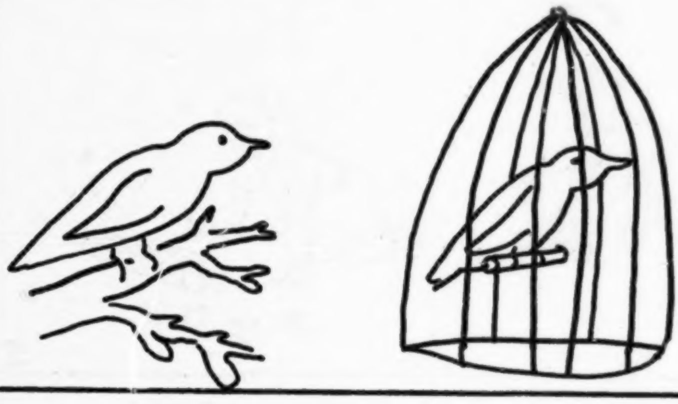

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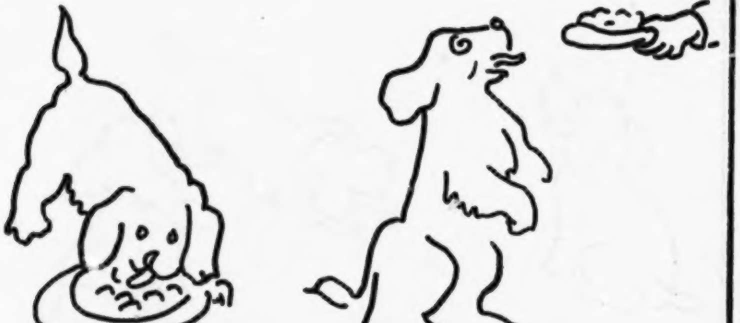

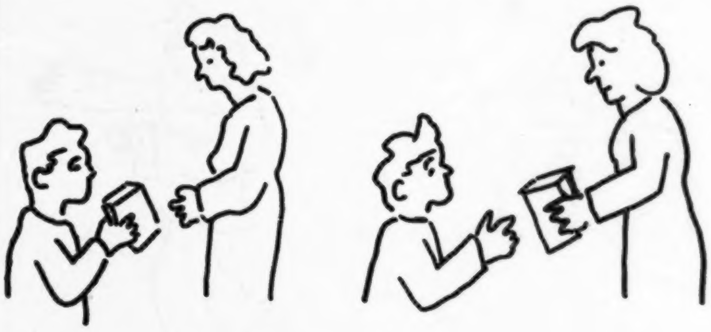

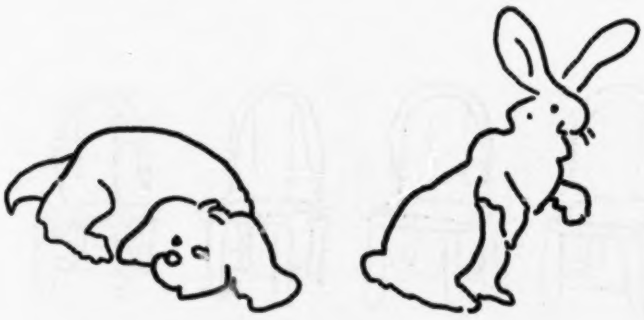

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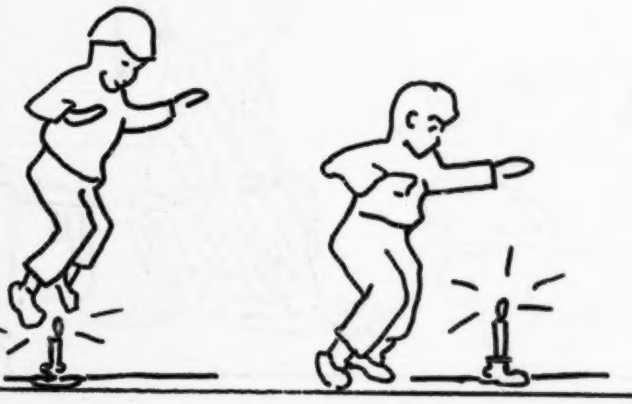

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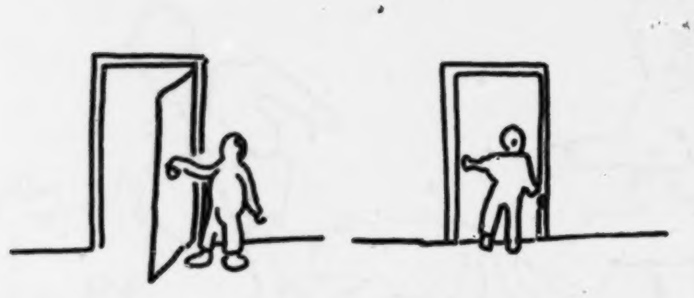

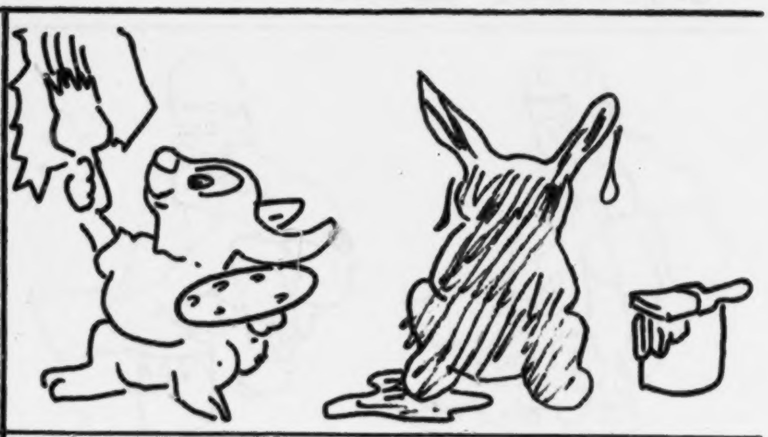

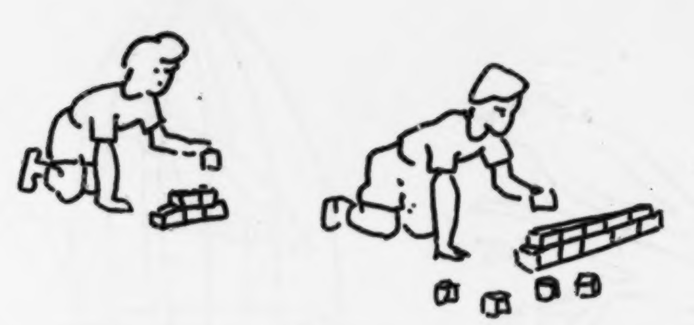

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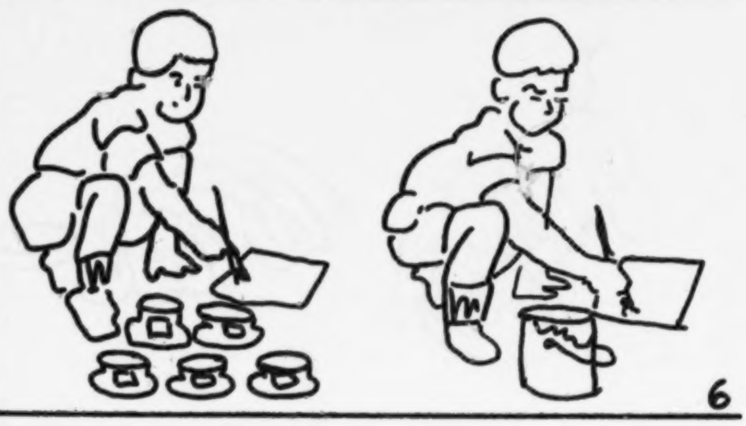

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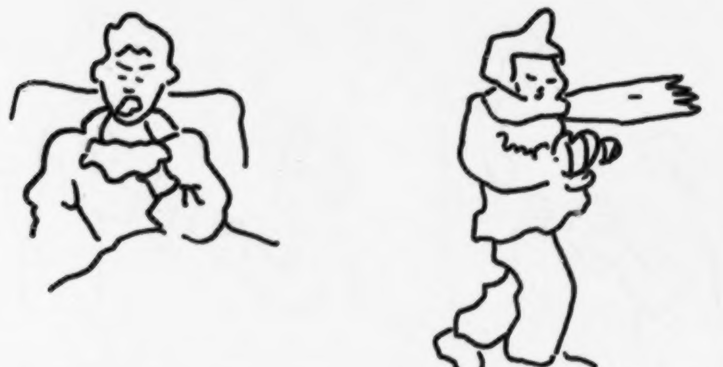

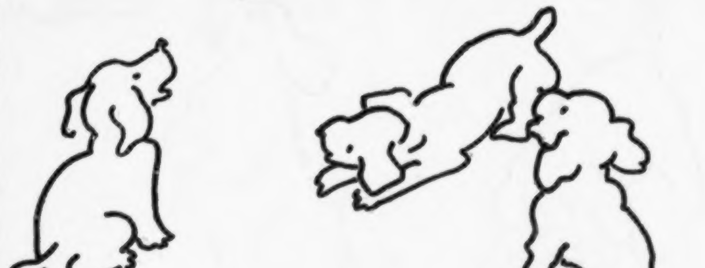

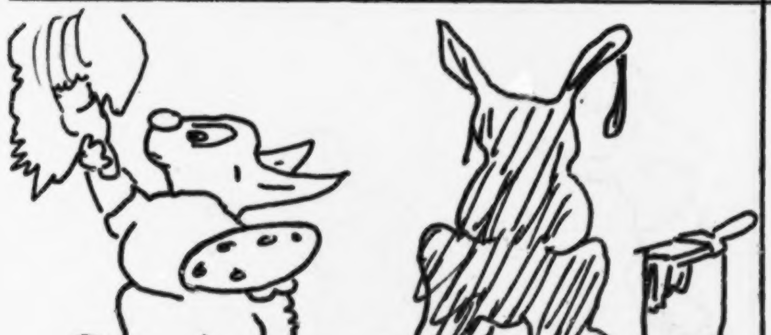

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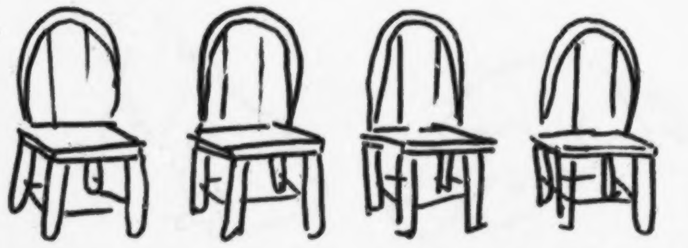

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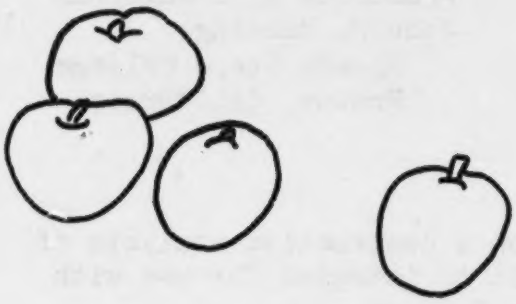	
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Appendix B_2

LINGUISTIC CAPACITY INDEX
MANUAL OF INSTRUCTIONS

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Fresno State College
Fresno, California

Purpose

The Linguistic Capacity Index is based on a contrastive analysis of English and Spanish grammar and phonology. It is intended for use with primary grade pupils whose native language is Spanish.

The test may be used as a measure of English language readiness to assist the classroom teacher in grouping pupils for more effective English language instruction. The Index also may be used to assess pupil achievement in learning English as a foreign language.

Contents

The Linguistic Capacity Index consists of three sections:

- Vocabulary Recognition
- Contrastive Phonology
- Contrastive Grammar

The vocabulary recognition section contains 20 items measuring recognition of noun, verb, preposition and adjective forms. In addition, all sixty items measure vocabulary development.

The twenty items of the contrastive phonology section measure the pupils' ability to distinguish the following pairs of sounds which are contrasted in English but not in Spanish.

(bean - bin)
(mane - men)
(cat - cot)
(cot - cut)
(bought - boat)
(pull - pool)
(bad - bed)
(Sue - zoo)
(ship - chip)
(lather - ladder)
(cupboard - covered)
(think - sink)

The contrastive grammar section of twenty items measures the pupils' understanding of English function words, word order and inflectional constructions which do not correspond to semantically similar constructions in Spanish.

- can plus a simple verb
- be plus ing as present tense
- has plus en as perfect tense
- noun as indirect object
- likes
- is cold vs. has a cold
- negative in verb - plus auxiliary constructions
- do - auxiliary constructions
- er and est adjective comparison
- noun as noun-modifier
- passive with be plus past participle

General Directions

The test should, if possible, be administered in the regular classroom. Light should be adequate and the testing completed early in the day. The atmosphere for testing should be alert but free of strain.

The examiner should test no more than ten pupils at any one time. All pupils should be within immediate reaching distance of the examiner to assist individual pupils in following directions. Additional pupils may be tested if additional personnel are available to assist in supervision.

Prior to the administration of the test the teacher must instruct the pupils in marking a line through a picture and in drawing a circle. In addition, the meaning of the word "square" as applied to the small and large rectangles of each test item should be explained. Pencils are recommended for pupil use.

The examiner should be a native speaker of English. Special care should be exerted in the pronunciation of each stimulus item. All words should be pronounced naturally, without exaggerating by stress or pitch or enunciation, the features of each item which are being examined. Thorough teacher knowledge of directions and test materials are imperative. It is recommended that the administration of the test be practiced before actual classroom use.

Total test time is approximately 35 minutes. The test may be given in one session provided that a classroom exercise activity is included between the Vocabulary and Contrastive Phonology sections and an outdoor play period is scheduled before administering the Contrastive Grammar section.

The teacher should complete page 1 of the test booklet before any test administration.

Pretest Procedures

Valid test procedures require that individual pupils follow directions carefully. To assist in the location of test items and to aid pupils in holding their place, the use of five symbol cards is encouraged. These symbol cards are numbered on the back and should be placed in front of the examiner, symbol down, in order $\boxed{1}\boxed{2}\boxed{3}\boxed{4}\boxed{5}$. The cards should remain out of the pupils' vision except when in actual use. If pupils can follow directions using the test item numbers, the symbol cards need not be used.

The pretest pages are designed to familiarize the pupil with:

- Marking a line
- Following symbol directions
- Sequence of test items.

Administration of the Pretest

The pupils should be seated so that comparing is avoided. The test materials and symbol cards should be neatly arranged for easy administration. The test booklet should be open to page 2. The page should be folded back so that only page 2 is visible.

Examiner: "Boys and girls, today we are going to mark some pictures. It is important that you listen very carefully so that you will mark the correct pictures. To help us find the pictures we are going to use these cards."

Examiner should show the cards slowly and in order 1, 2, 3, 4, and 5.

"Look at the top of this page."

Examiner shows test booklet, page 2.

1. "In this little square (examiner demonstrates) put your finger on the picture that looks like this."

Examiner shows card #1 for about two seconds.

"In this big square (examiner demonstrates) mark the picture that looks the same."

Examiner marks demonstration booklet, then observes if pupils have followed directions.

2. "In this little square (examiner demonstrates) put your finger on the picture that looks like this."

Examiner shows card #2.

"In this little square (examiner demonstrates) mark the picture that looks the same."

Examiner marks demonstration booklet, then observes if pupils have followed directions. The examiner continues in this manner for pretest items 3, 4, and 5, visually checking after each item to insure that directions are being followed. When the pretest is completed fold booklets to page 3.

Test Procedures

Certain common directions should be given for each test item. These directions employ the symbol card and direct the pupil to place his finger on the picture corresponding to the symbol card. The sequence of the cards remains the same for each page throughout the test. It is important, however, that the cards be placed in a row $\boxed{1}$ $\boxed{2}$ $\boxed{3}$ $\boxed{4}$ $\boxed{5}$ rather than in a stack. Confusion will be avoided if the examiner holds the manual of instructions in the left hand and shows the cards with the right hand.

The speed with which the cards are shown should be rapidly increased as the pupils show evidence of ability to follow directions.

Common Direction

"Put your finger on the picture that looks like this. (Show cards in order.) In the big square mark the ______."

The letters CD - SC #___ before each test item refers to this common direction and indicates the symbol card to be used.

Vocabulary Section: Page 3

Examiner: "Boys and girls, look at the top of this page. (Examiner demonstrates) Place your finger on this picture. (Examiner shows symbol card #1) In the square

1. Mark the hand. Mark the hand."

The exact underlined stimulus words should be repeated twice only for each test item. No additional words should be used or substituted.

2. CD - SC #2 Mark the house.
3. CD - SC #3 Mark the nose.
4. CD - SC #4 Mark the farm.
5. CD - SC #5 Mark the boy with a book.

Fold test booklet to page 4.

6. CD - SC #1 Mark the boy who is running.
7. CD - SC #2 Mark the boy who is walking.
8. CD - SC #3 Mark the boy who is going to school.
9. CD - SC #4 Mark the boy who is under the box.
10. CD - SC #5 Mark the boy who is going across.

Fold the test booklet to page 5.

11. CD - SC #1 Mark the boy who is in the box.
12. CD - SC #2 Mark the boy who is looking at the house.
13. CD - SC #3 Mark the boy who is going down.
14. CD - SC #4 Mark the boy who is on the box.
15. CD - SC #5 Mark the boy who is beside the box.

Fold test booklet to page 6.

16. CD - SC #1 Draw a circle around a boy.
17. CD - SC #2 Draw a circle around some dogs.
18. CD - SC #3 Draw a circle around all the apples.
19. CD - SC #4 Draw a circle around both the cats.
20. CD - SC #5 Draw a circle around each dog.

Examiner: "Stop, put your pencils down." Classroom exercise.

Contrastive Phonology Section: Page 7

1. CD - SC #1 Mark the pen. (Repeat the stimulus item twice.)
2. CD - SC #2 Mark the ship.
3. CD - SC #3 Mark the nut.
4. CD - SC #4 Mark the saw.
5. CD - SC #5 Mark pull.

Fold booklets to page 8.

6. CD - SC #1 Mark the man.
7. CD - SC #2 Mark the cupboard.
8. CD - SC #3 Mark the shoe.
9. CD - SC #4 Mark the mouth.
10. CD - SC #5 Mark the leather.

Fold booklets to page 9.

11. CD - SC #1 Mark the sink.
12. CD - SC #2 Mark the pan.
13. CD - SC #3 Mark the sheep.
14. CD - SC #4 Mark the knot.
15. CD - SC #5 Mark the pool.

Fold booklets to page 10.

16. CD - SC #1 Mark the men.
17. CD - SC #2 Mark chew.
18. CD - SC #3 Mark the mouse.
19. CD - SC #4 Mark the letter.
20. CD - SC #5 Mark sing.

Examiner: "Stop, put your pencils down."

If necessary, pupils should be given an outdoor exercise period.

Contrastive Grammar: Page 11

1. CD - SC #1 Mark the bird that can fly away.
2. CD - SC #2 Mark the dog that is eating.
3. CD - SC #3 Mark the dog that has eaten.
4. CD - SC #4 Mark the boy who is jumping.
5. CD - SC #5 Mark the boy who is giving his mother a book.

Fold booklets to page 12.

6. CD - SC #1 Mark the boy who likes the dog.
7. CD - SC #2 Mark the rabbit that is painting.
8. CD - SC #3 Mark the boy who is cold.
9. CD - SC #4 Mark the animal that doesn't sing.
10. CD - SC #5 Mark the boy who is taller.

Fold booklets to page 13.

11. CD - SC #1 Mark the bird that can't fly away.
12. CD - SC #2 Mark the animal that has eaten.
13. CD - SC #3 Mark the boy who is going to jump.
14. CD - SC #4 Mark the mother who is giving her boy a book.
15. CD - SC #5 Mark the doghouse.

Fold booklets to page 14.

16. CD - SC #1 Mark the boy who doesn't like the dog.
17. CD - SC #2 Mark the rabbit that is painted.
18. CD - SC #3 Mark the boy who has a cold.
19. CD - SC #4 Mark the boy who is the tallest.
20. CD - SC #5 Mark the boy who has more blocks.

Scoring

The *Linguistic Capacity Index* yields a raw score (number correct) and percentile rank (to be developed).

The yellow scoring sheet should be used to correct the test.

Raw scores for each section should be entered on page 1 of the test booklet.

Interpretation

The section scores of the *Linguistic Capacity Index* will reveal the level of language proficiency attained by individual pupils.

More significantly, item analysis within the vocabulary, contrastive phonology and contrastive grammar sections will reveal specific weakness areas for language instruction.

Research Project #2821 Appendix B_2

Group ___________

Linguistic Capacity Index
Analysis of Errors

Name ____________________ Class ______________ Date _______

Vocabulary

Nouns

1 ___ 2 ___ 3 ___ 4 ___

Verbs

6 ___ 7 ___ 8 ___

Prepositions

5 ___ 9 ___ 10 ___ 11 ___ 12 ___ 13 ___ 14 ___ 15 ___

Adjectives

16 ___ 17 ___ 18 ___ 19 ___ 20 ___

Total Possible 20 Score ___ ___%

Phonology

/i/ /e/ /æ/	1 ___	12 ___	/æ/ /e/	6 ___	16 ___
/ši/ /šiy/ /či/	2 ___	13 ___	/v/ /b/	7 ___	
/a/ /ə/ /æ/	3 ___	14 ___	/č/ /š/	8 ___	17 ___
/a/ /ow/	4 ___		/aws/ /awθ/ /ɔθ/	9 ___	18 ___
/u/ /uw/ /o/	5 ___	15 ___	/d/ /ð/ /t/	10 ___	19 ___
			/θ-ŋk/ /s-ŋk/ /s-ŋ/	11 ___	20 ___

Total Possible 20 Score ___ ___%

Grammar

-can plus a simple verb	1 ___		
-be plus ing as present tense	2 ___	4 ___	7 ___
-has plus en as perfect tense	3 ___	12 ___	
-noun as indirect object	5 ___	14 ___	
-likes	6 ___		
-is cold vs. has a cold	8 ___	18 ___	
-negative in verb-plus auxiliary constructions	11 ___		
-do - auxiliary constructions	9 ___	16 ___	
-er and est adjective comparison	10 ___	19 ___	
-more as adjective comparison	20 ___		
-be going to as future	13 ___		
-noun as noun-modifier	15 ___		
-passive with be plus past participle	17 ___		

Total Possible 20 Score ___ ___%

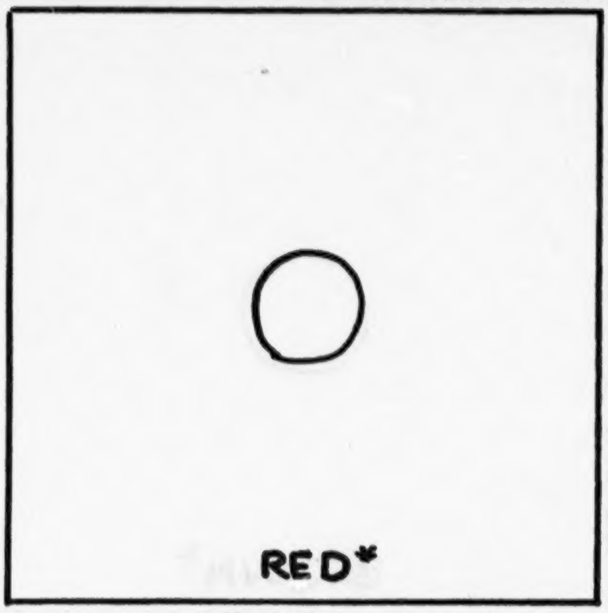
Total Possible 60

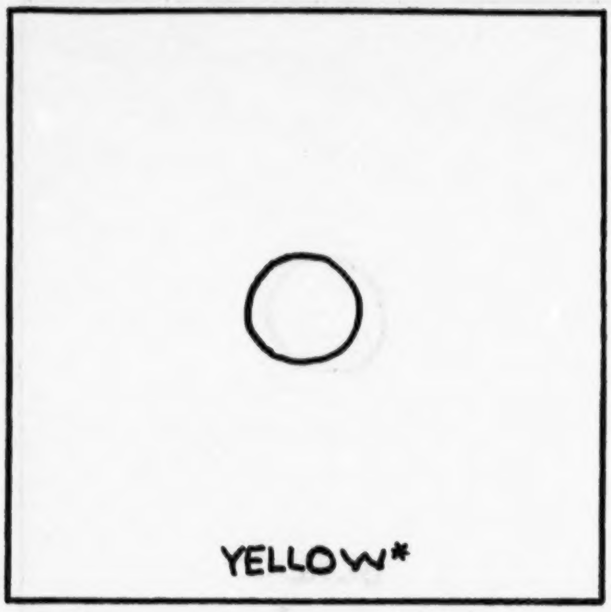
No. Correct Responses ___ ___%

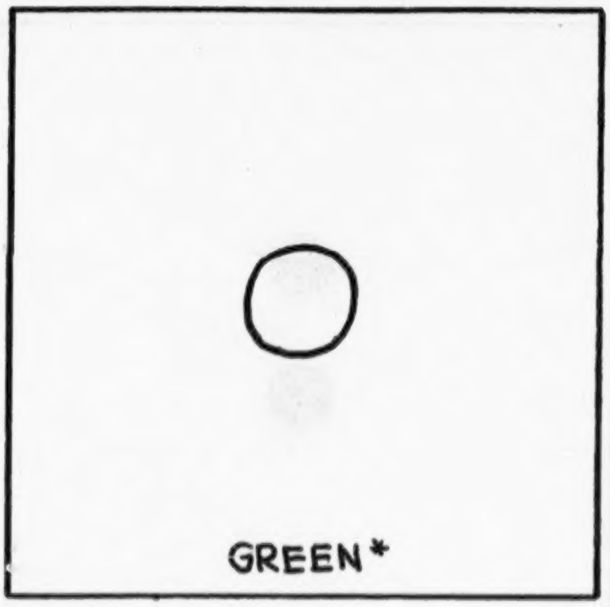
Appendix B_3

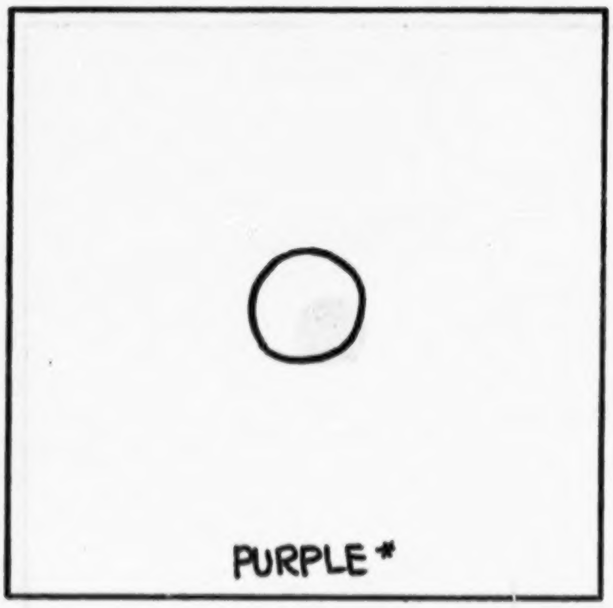
PHONEMIC PRODUCTION SURVEY

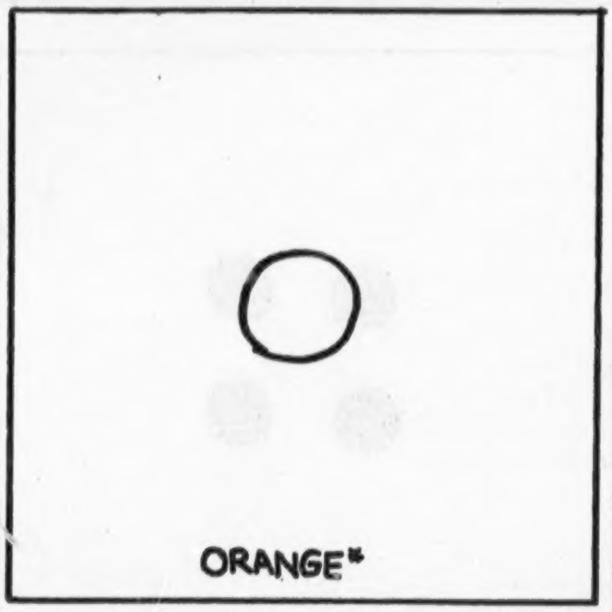
CARDS APPROXIMATELY 3/4 SIZE

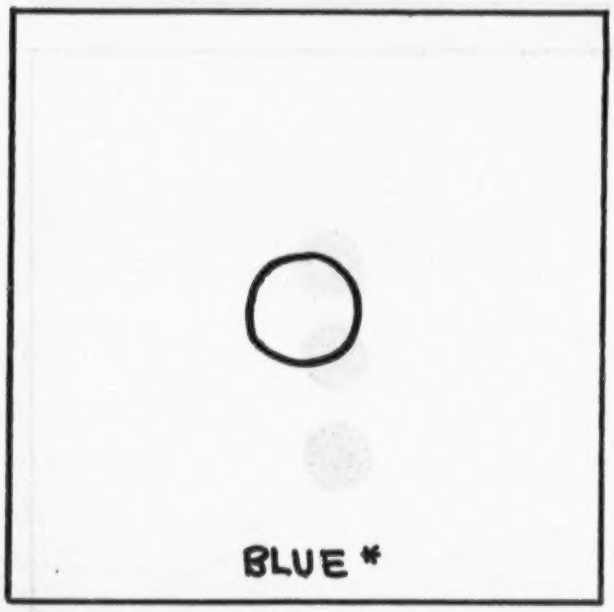












*ORIGINAL COLORS WERE APPROPRIATELY COLORED. NO WORDING.

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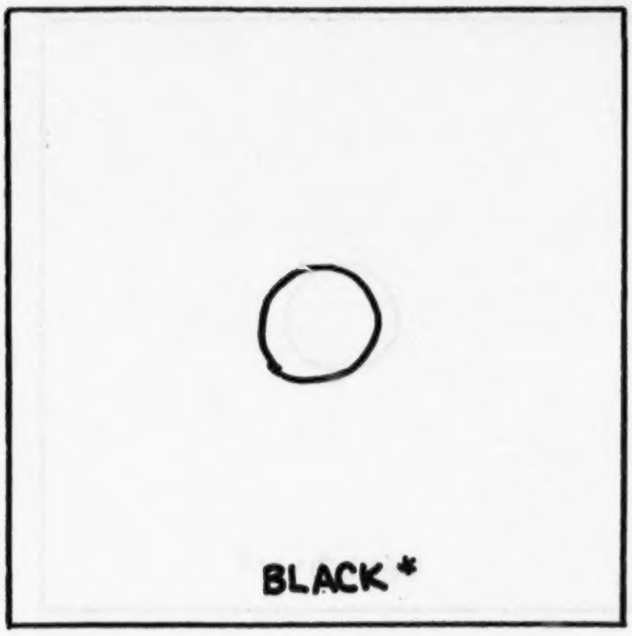

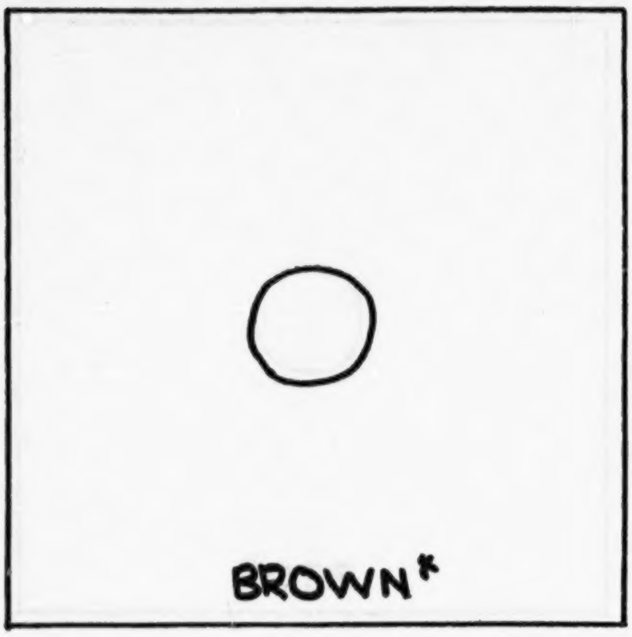

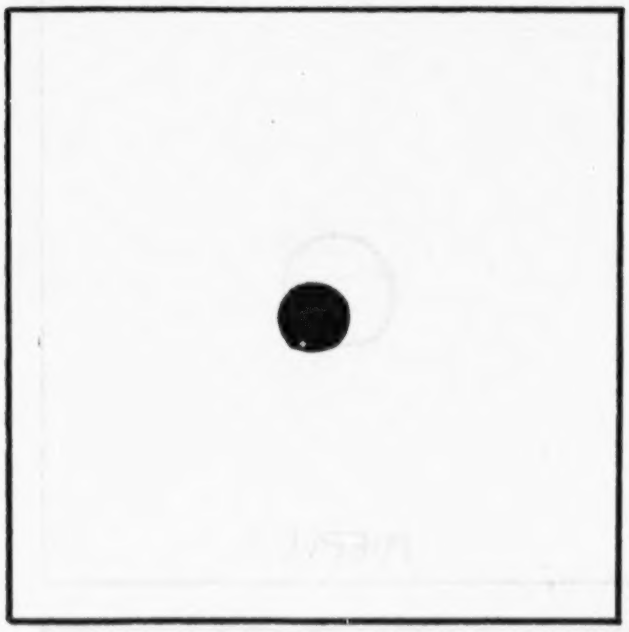

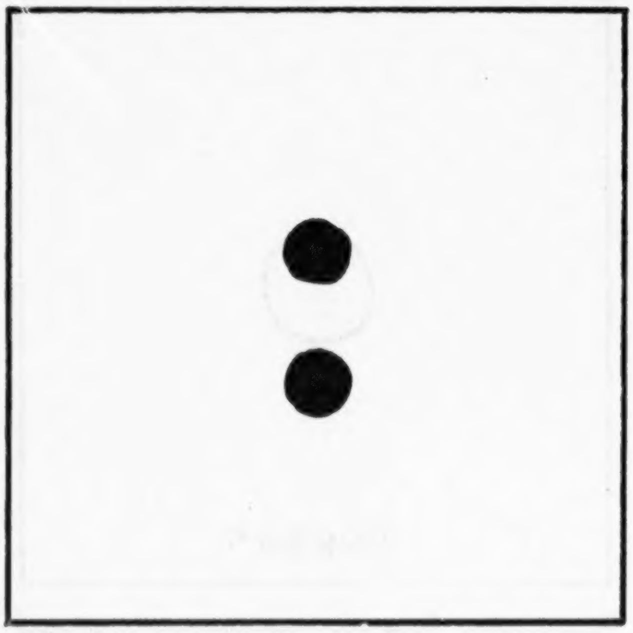

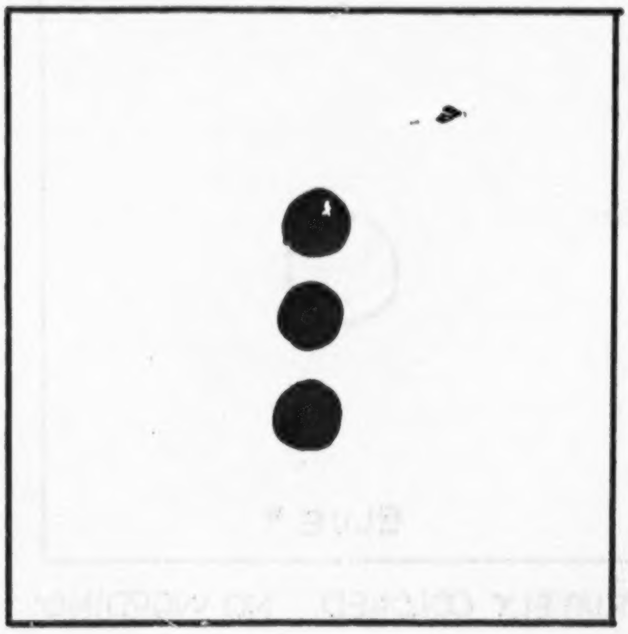

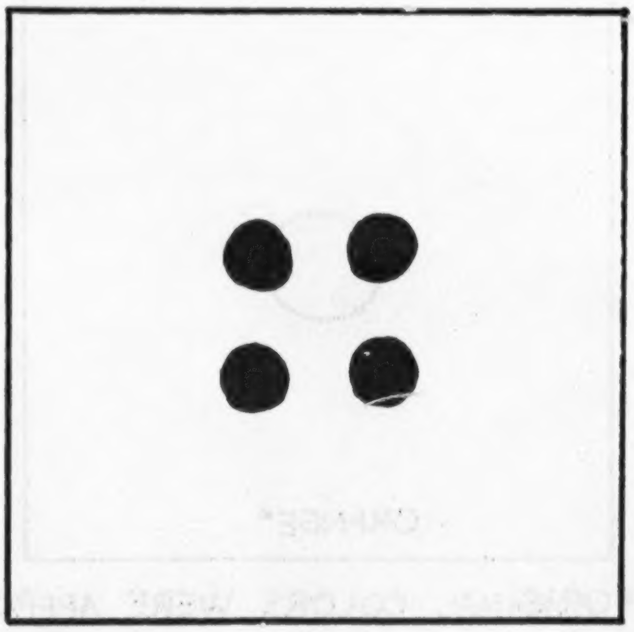

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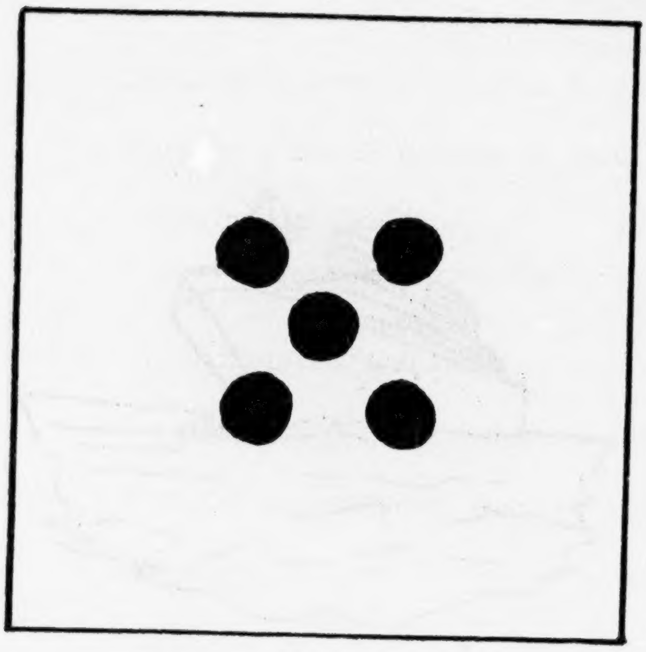

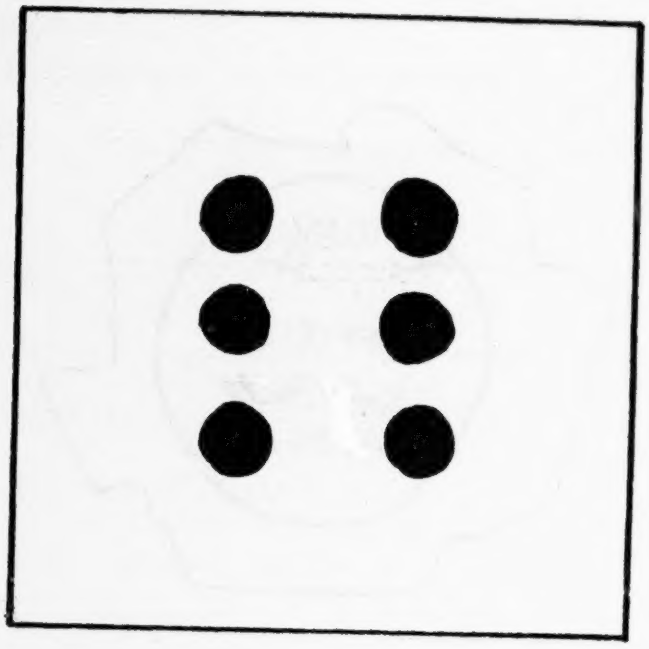

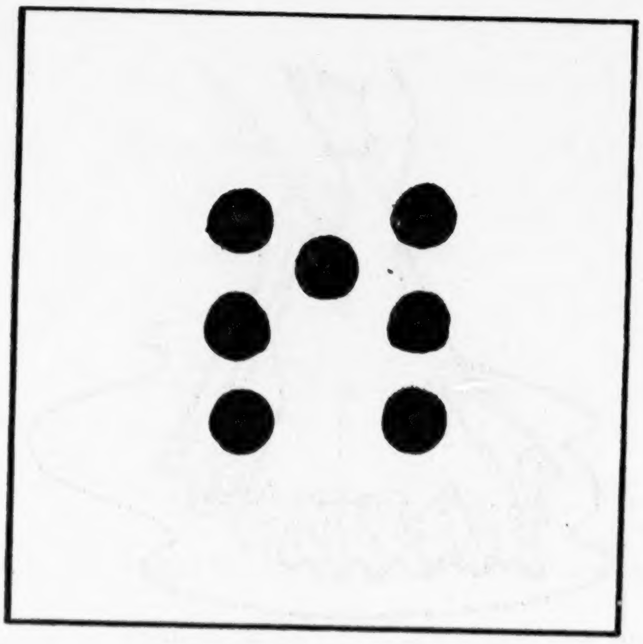

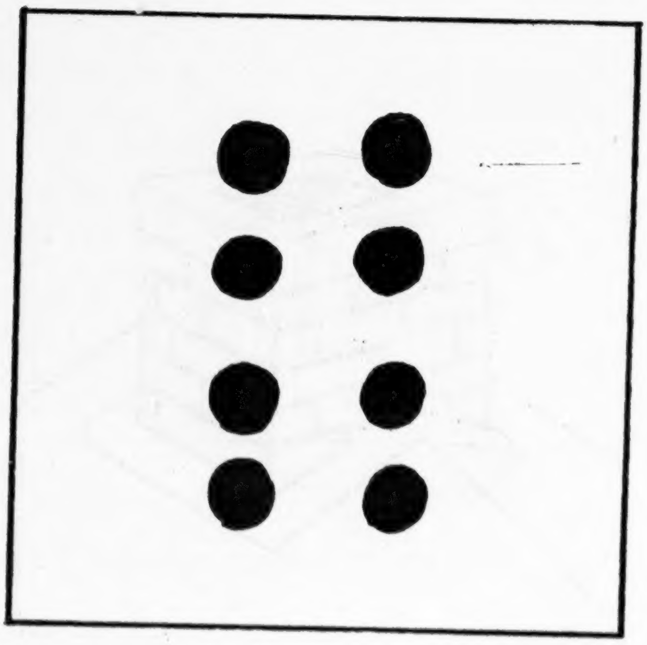

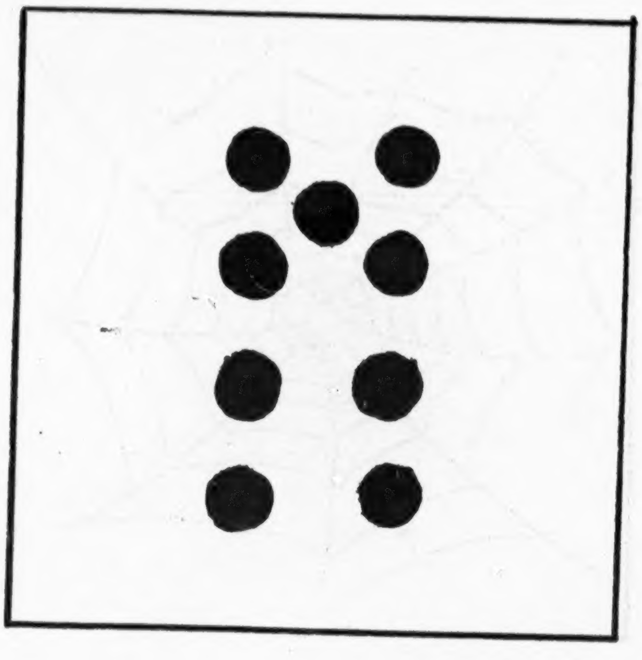

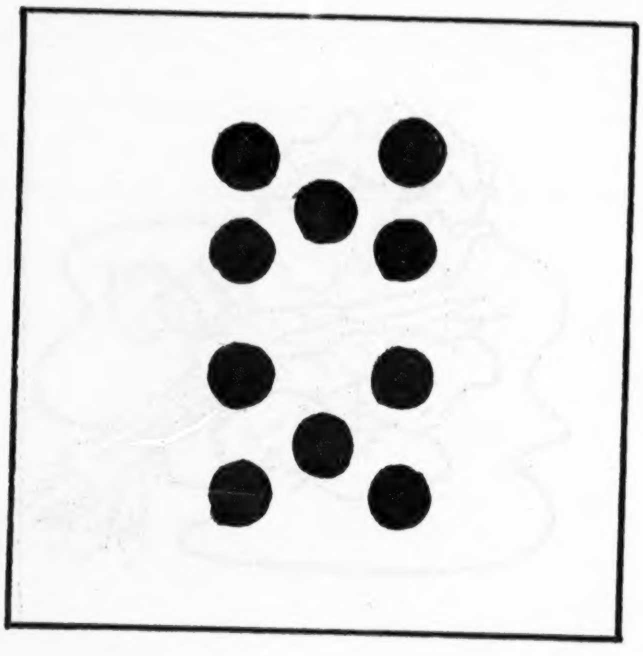

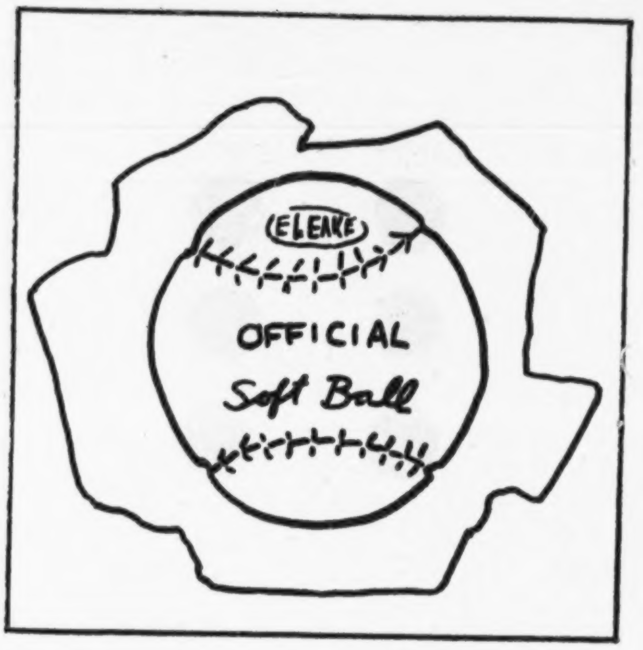
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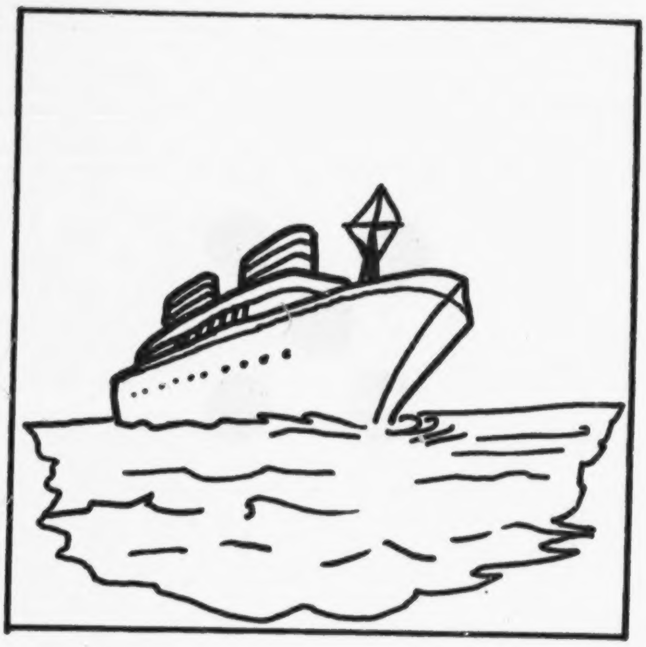
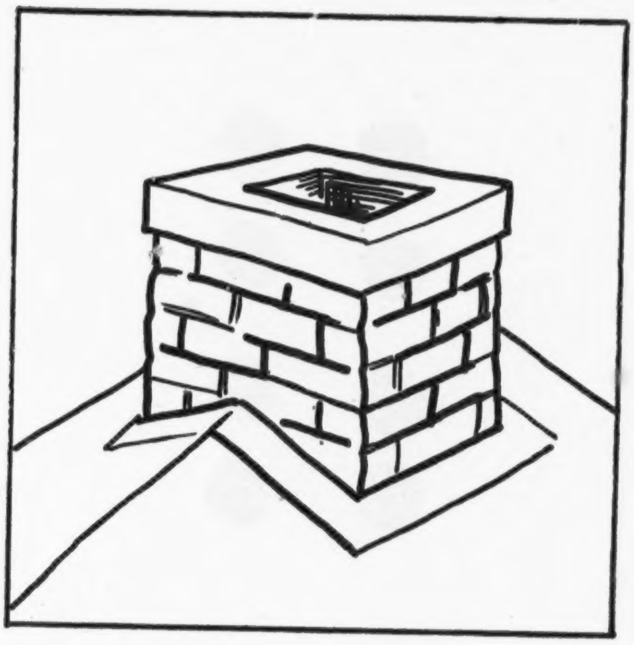
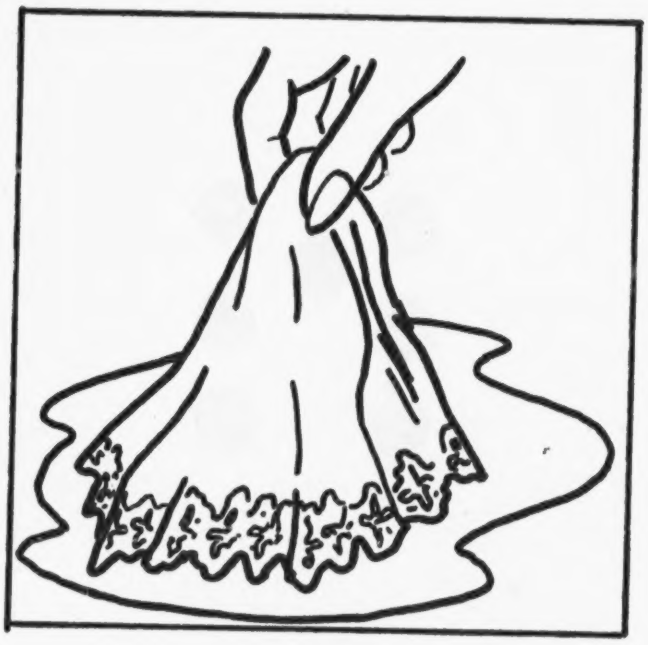
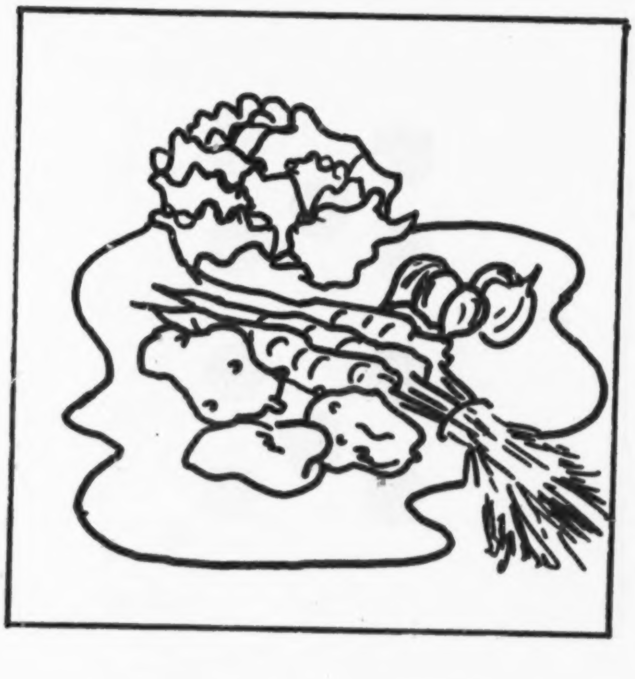
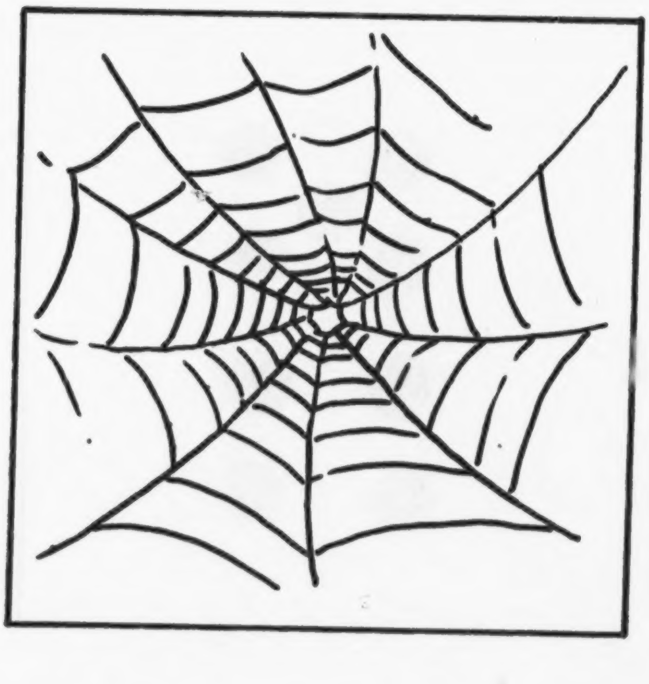
OFFICIAL
Soft Ball

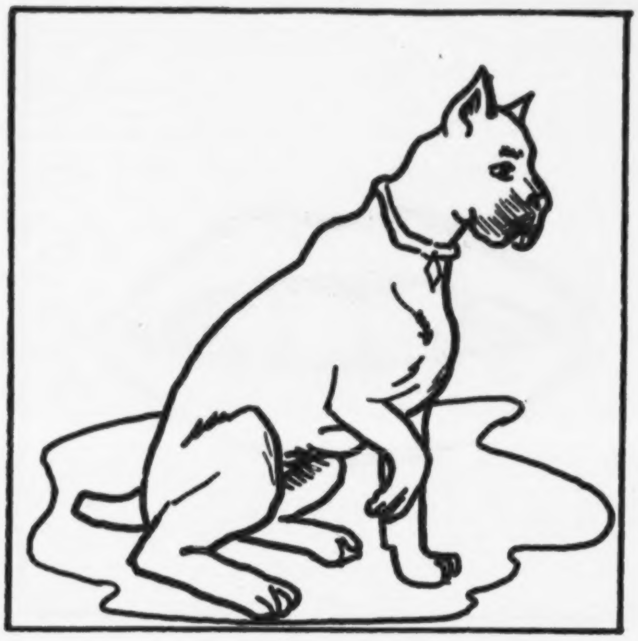


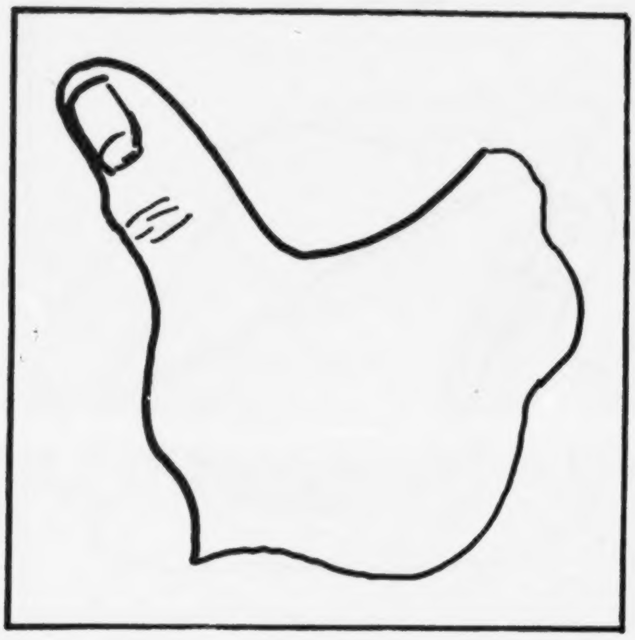


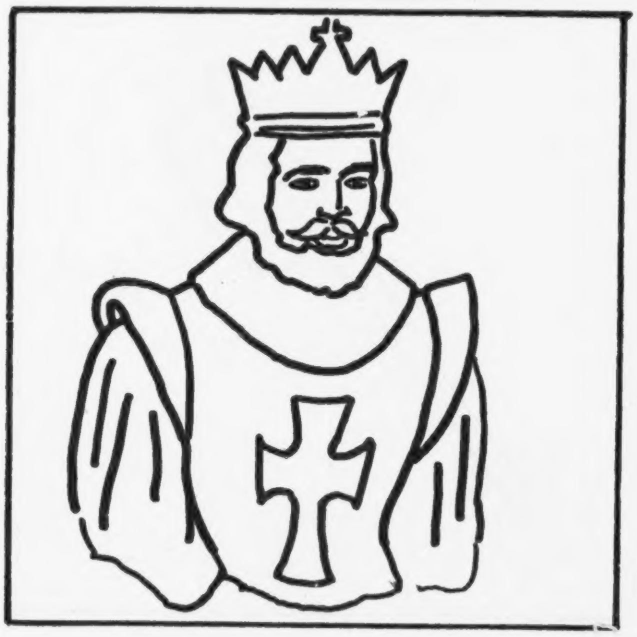


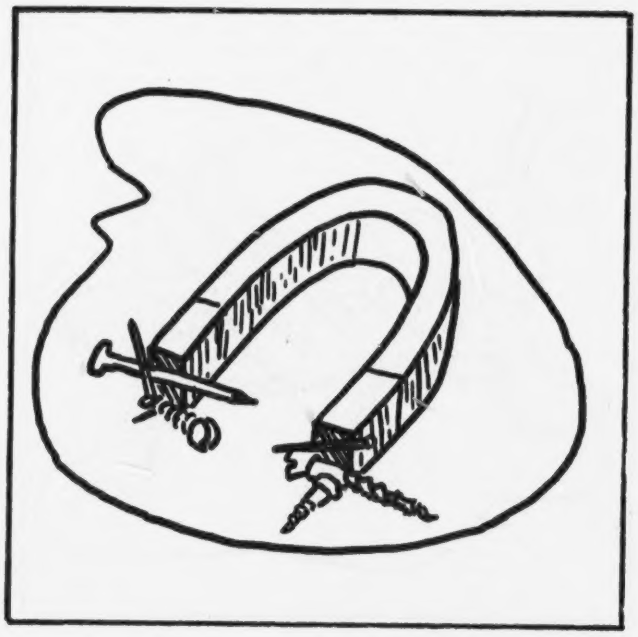


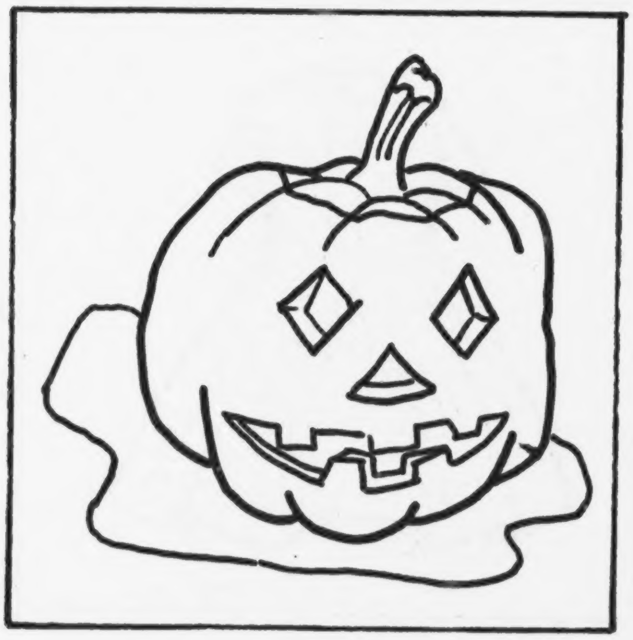


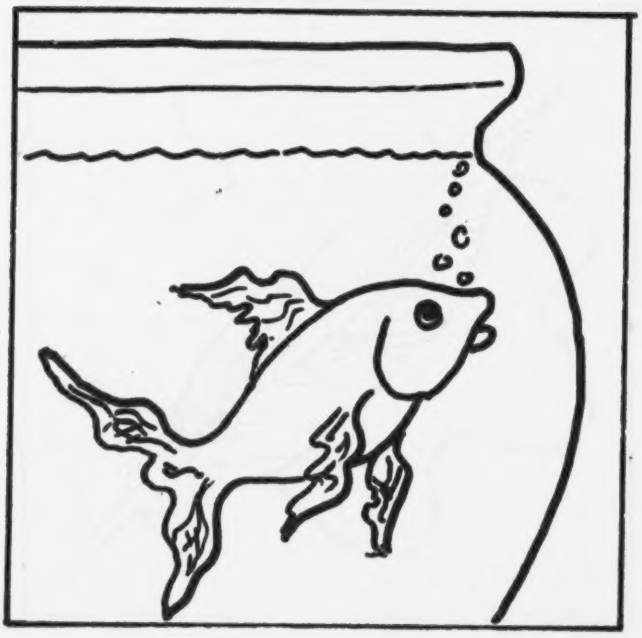












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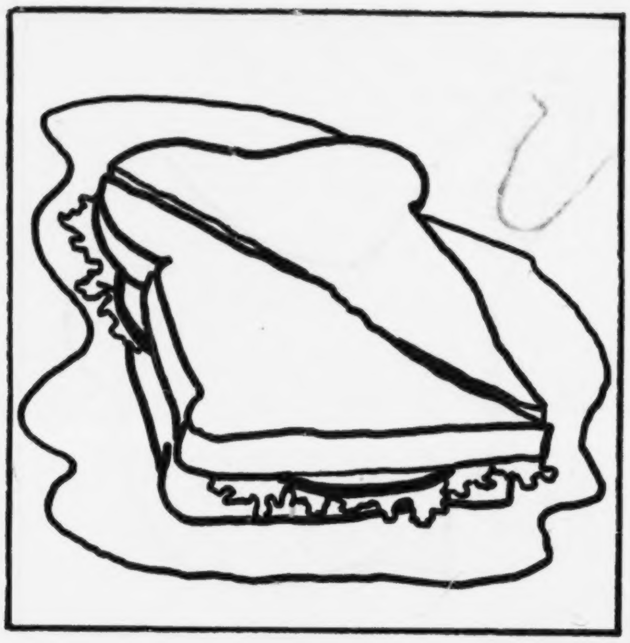

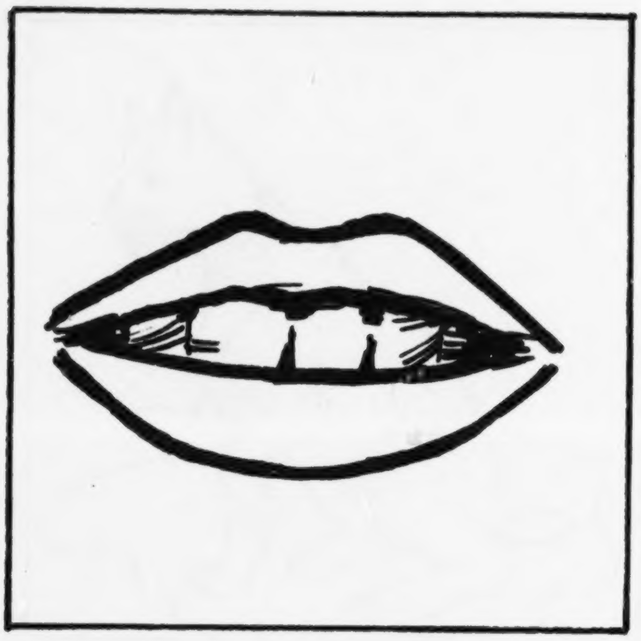

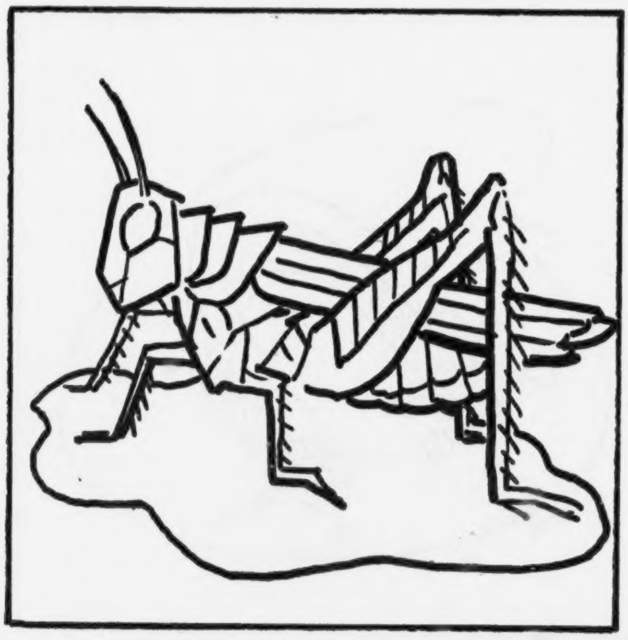

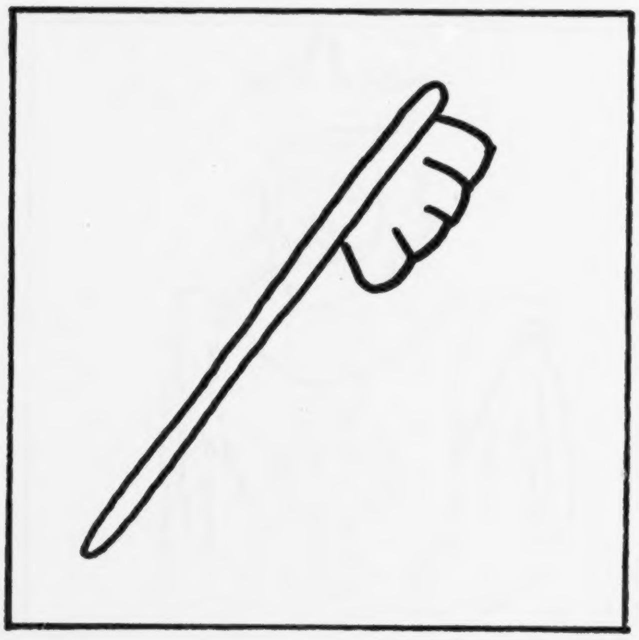

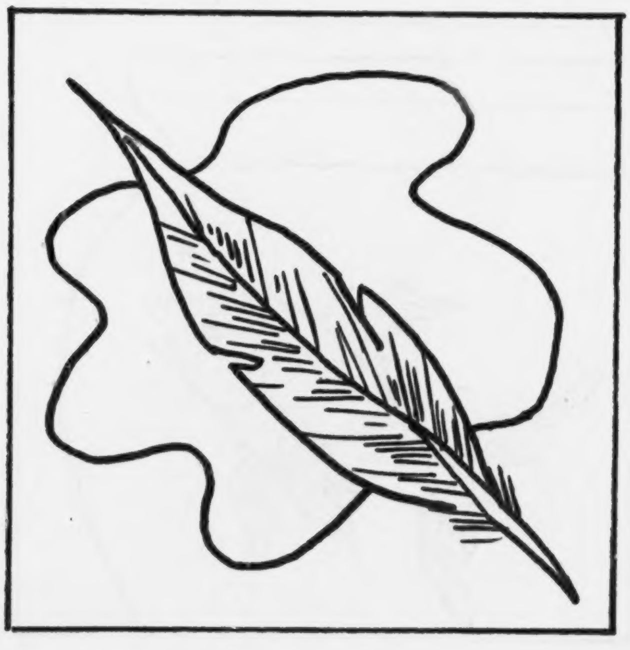

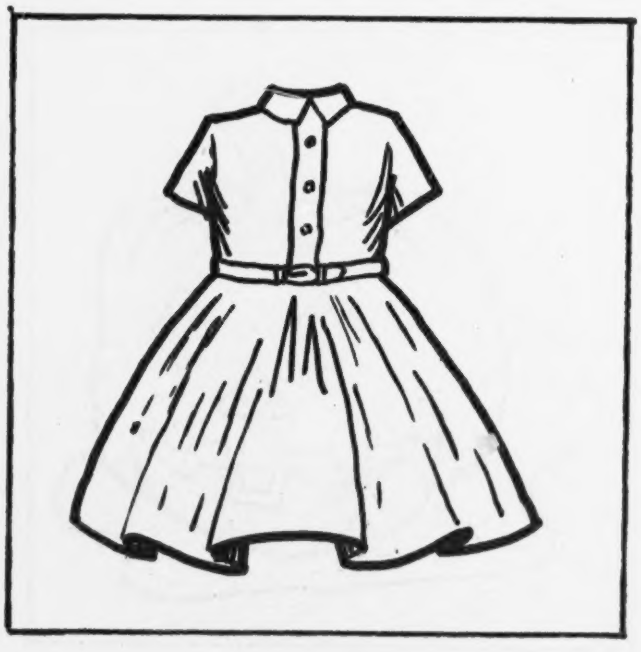

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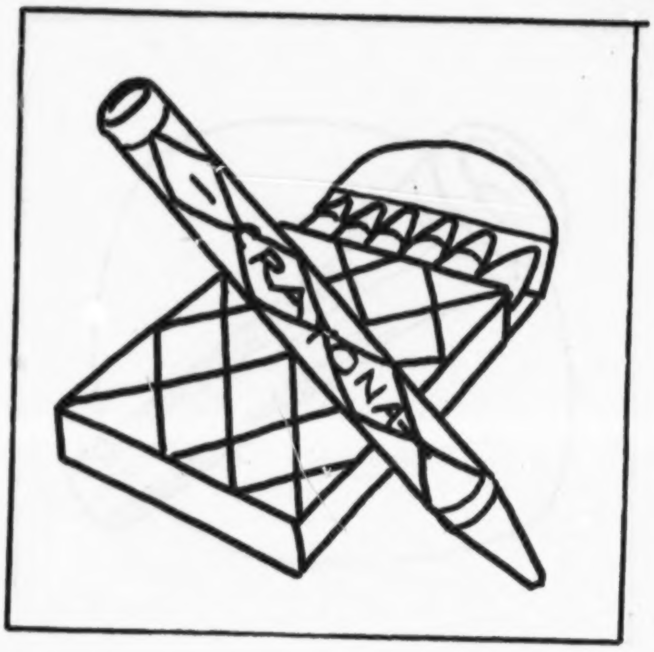

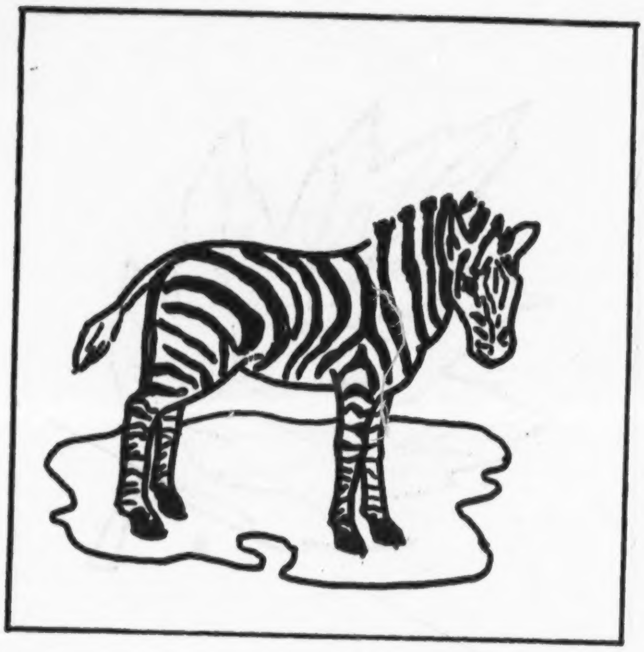

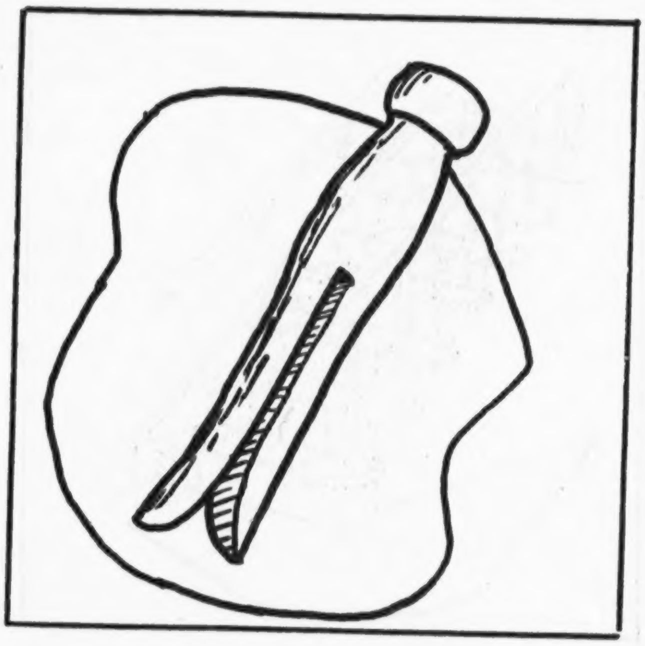

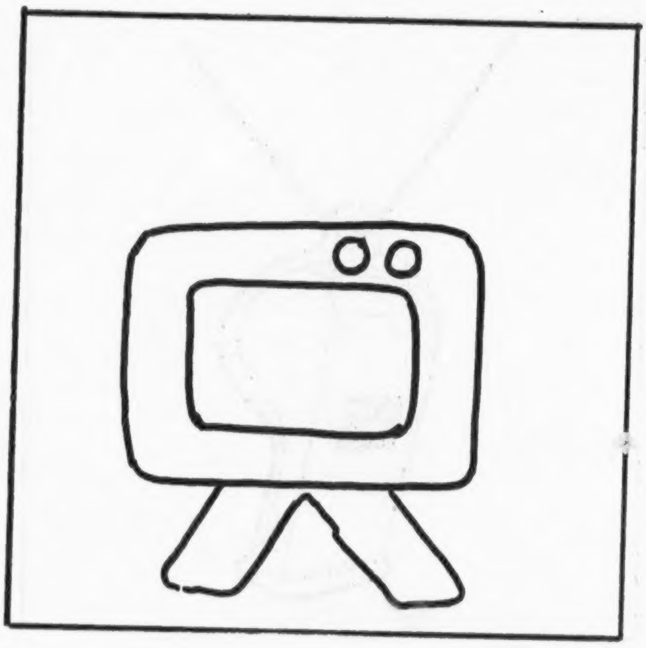

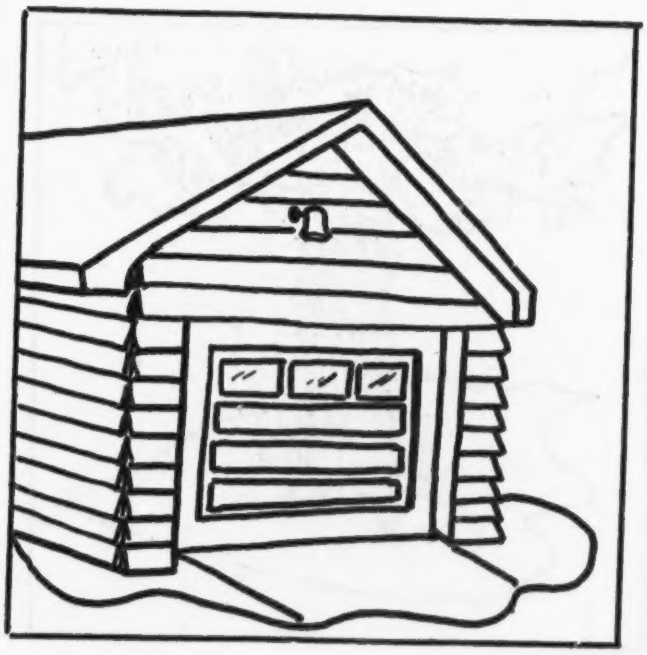

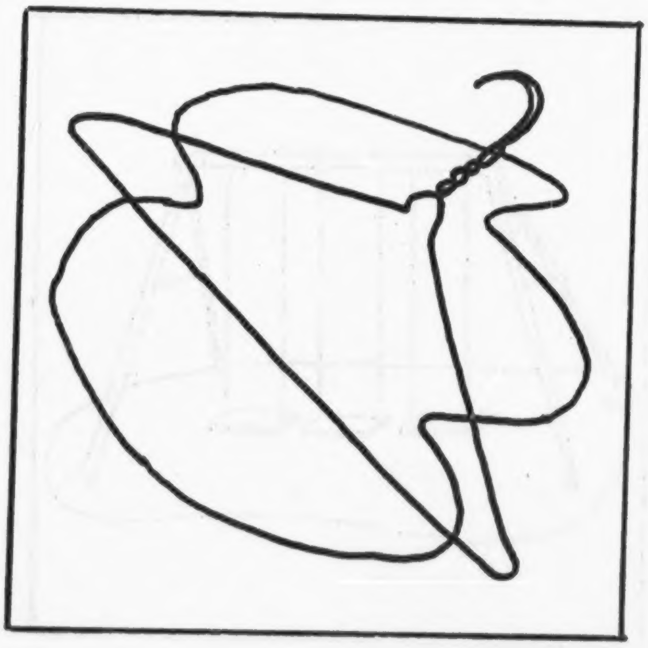

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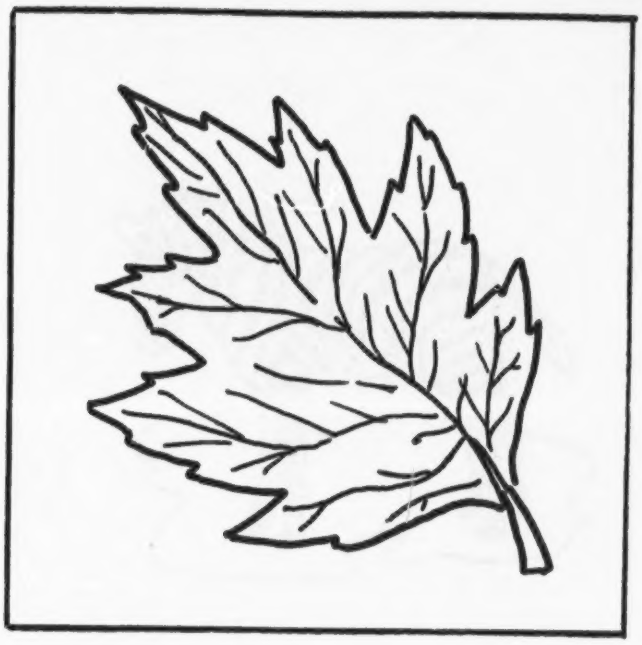

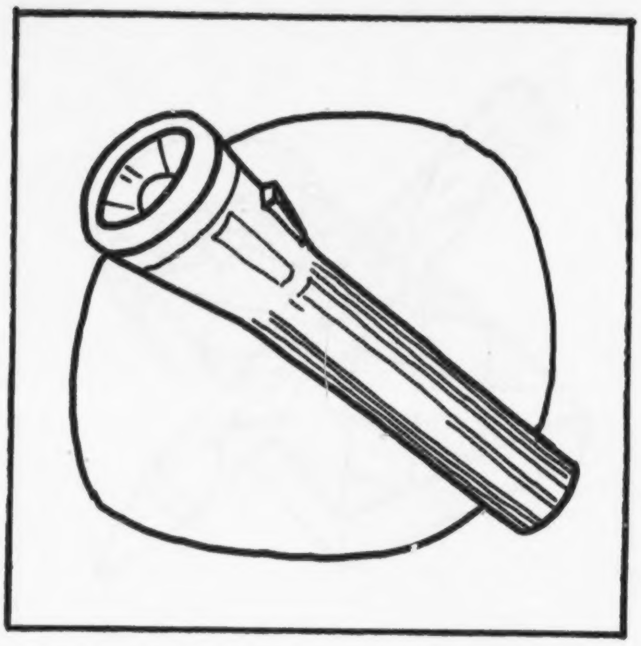

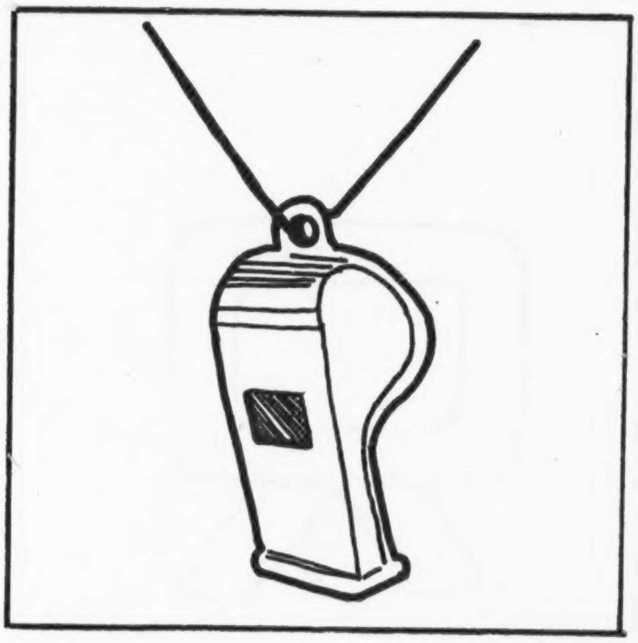

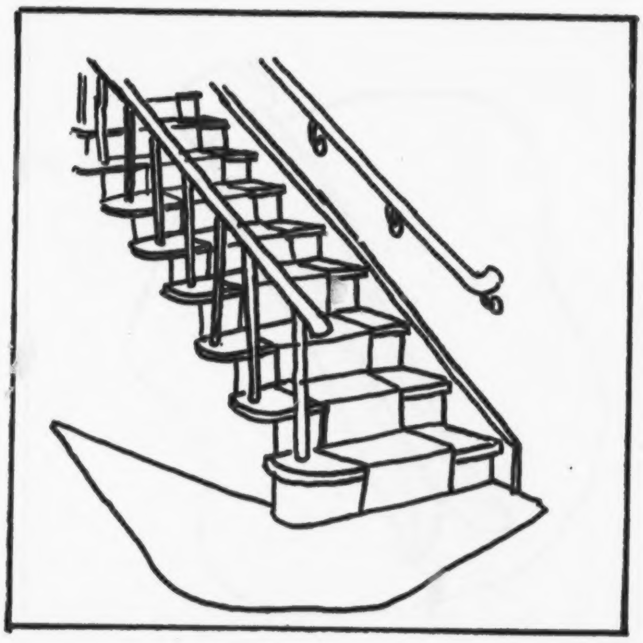

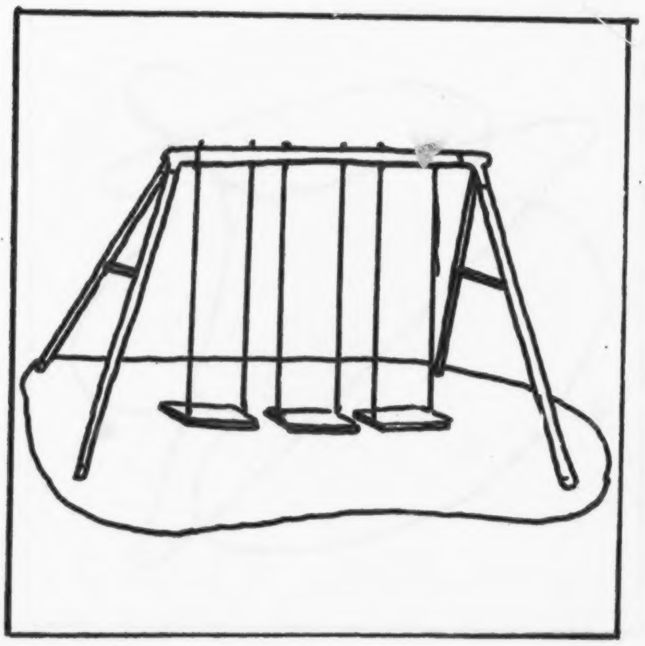

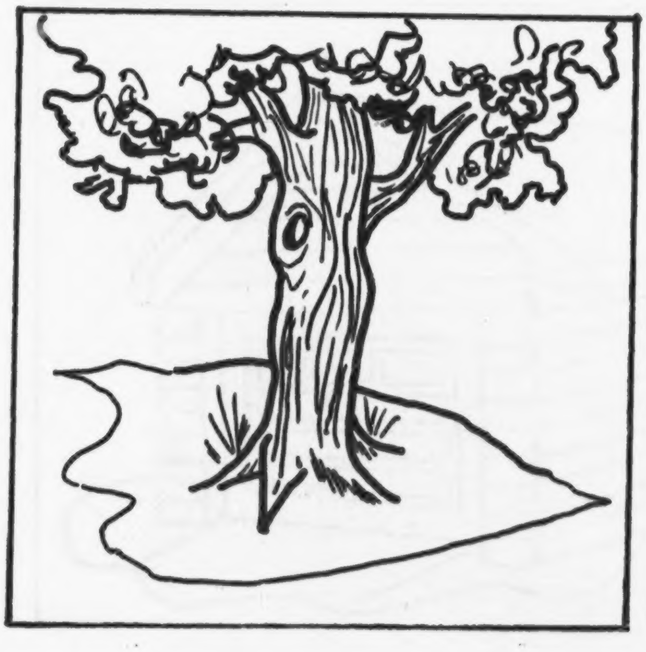

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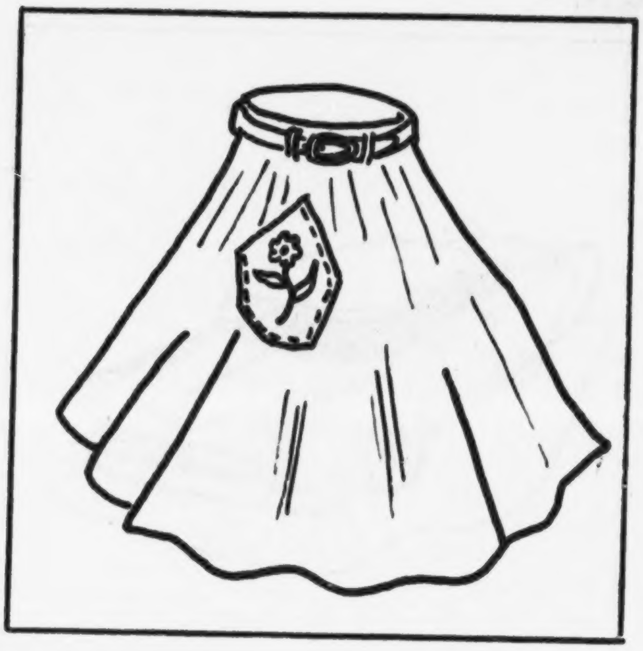

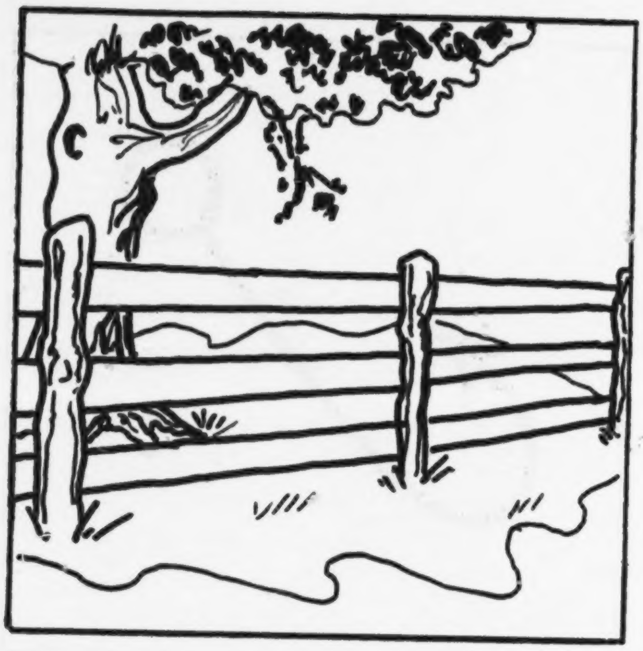

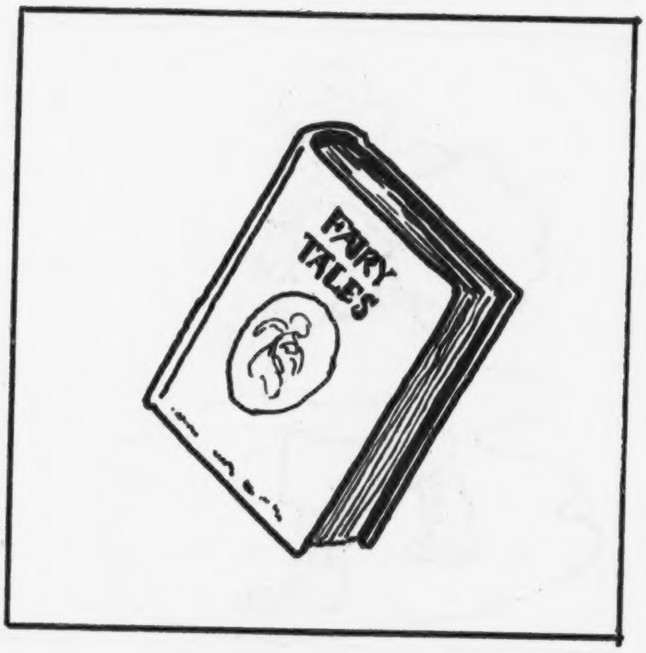

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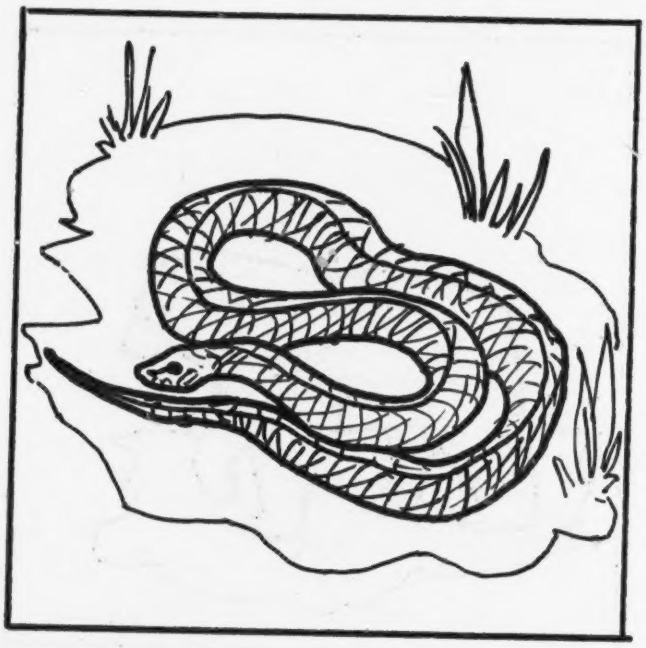

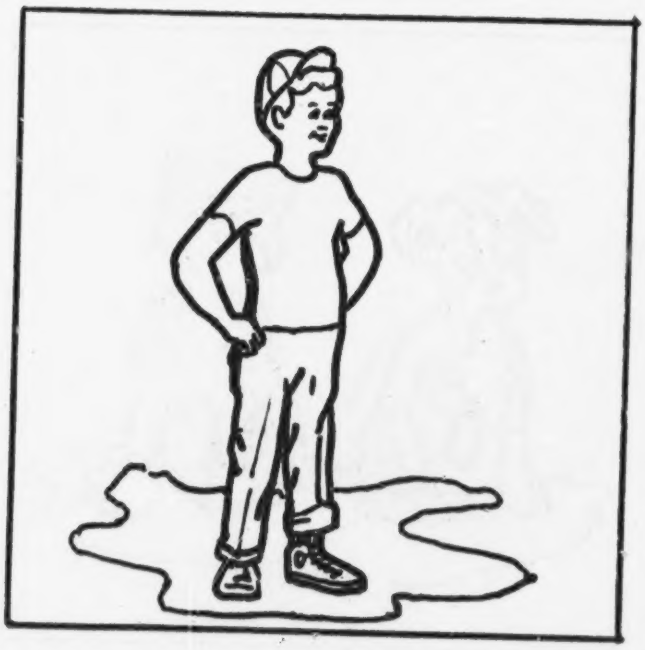

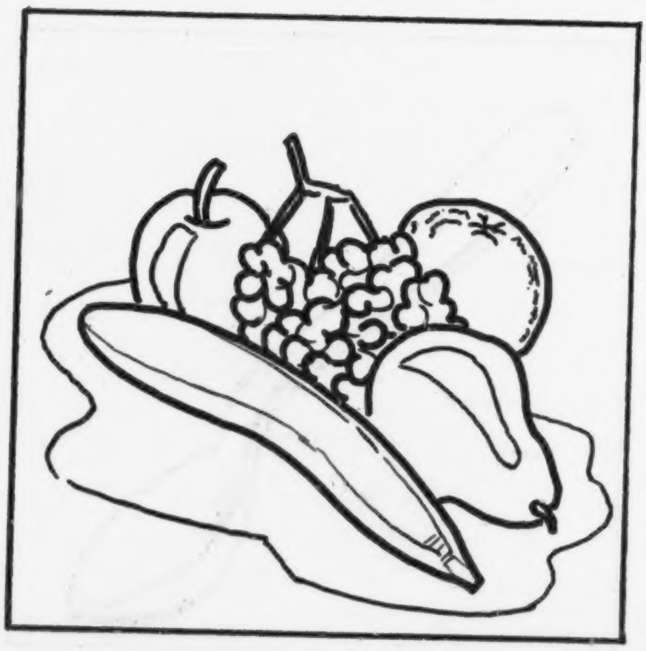

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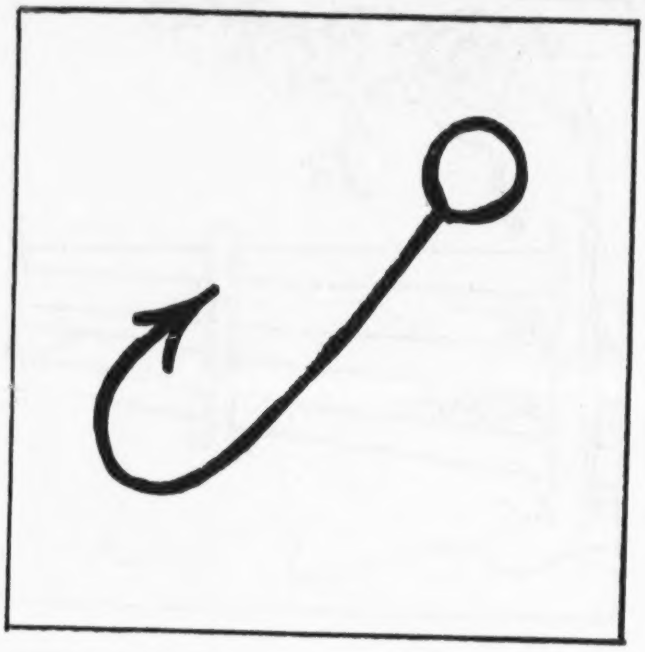
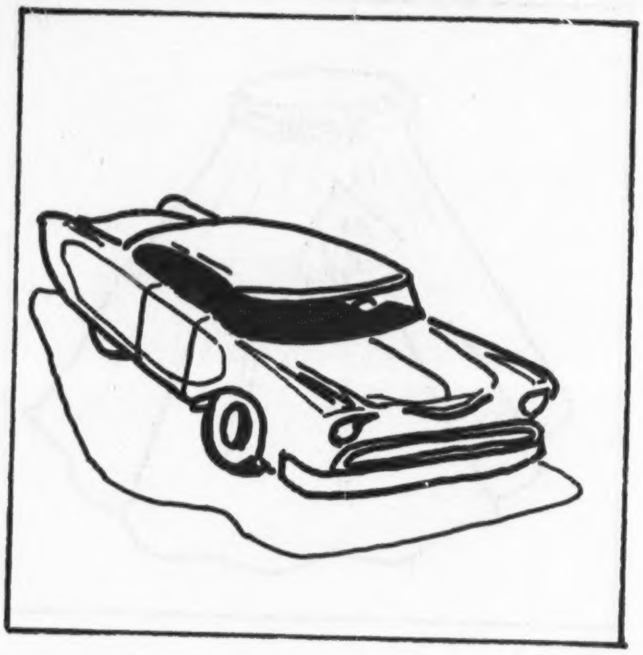
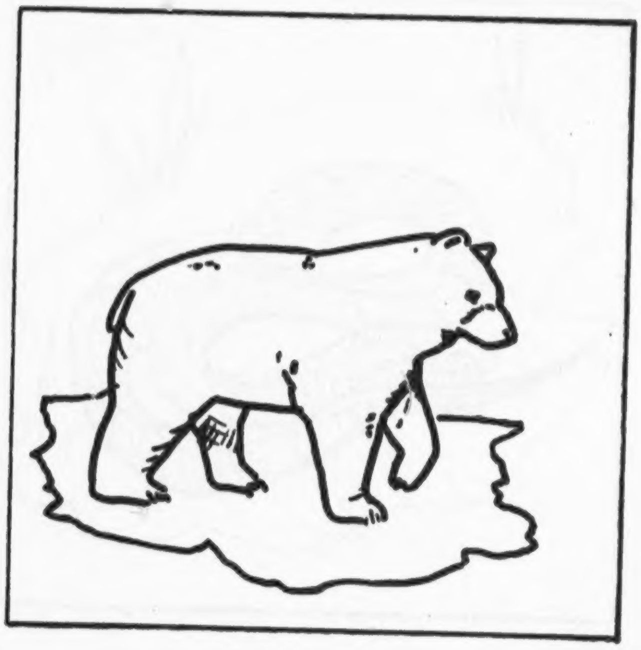
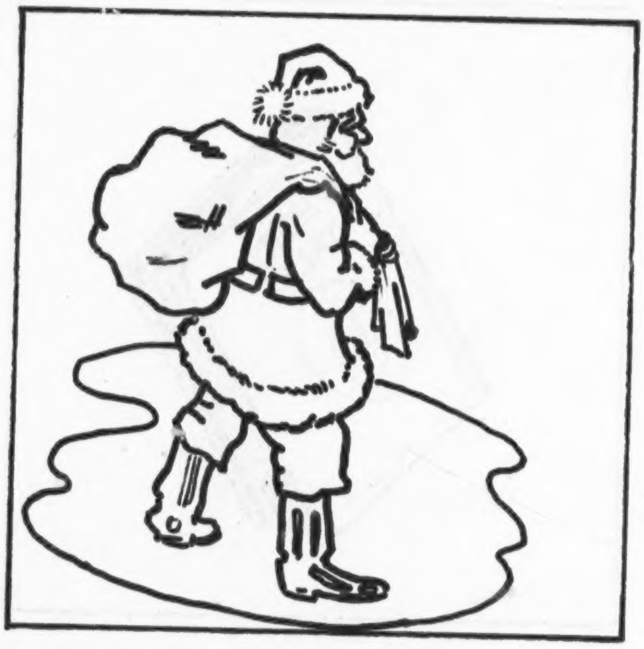
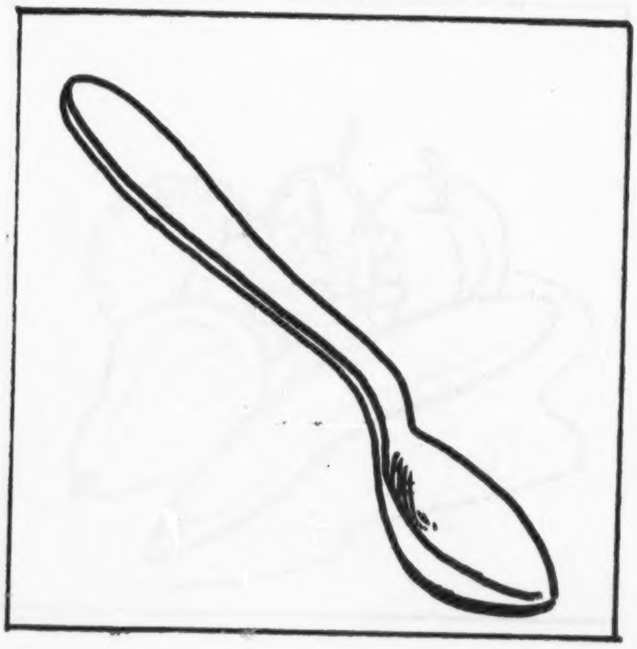
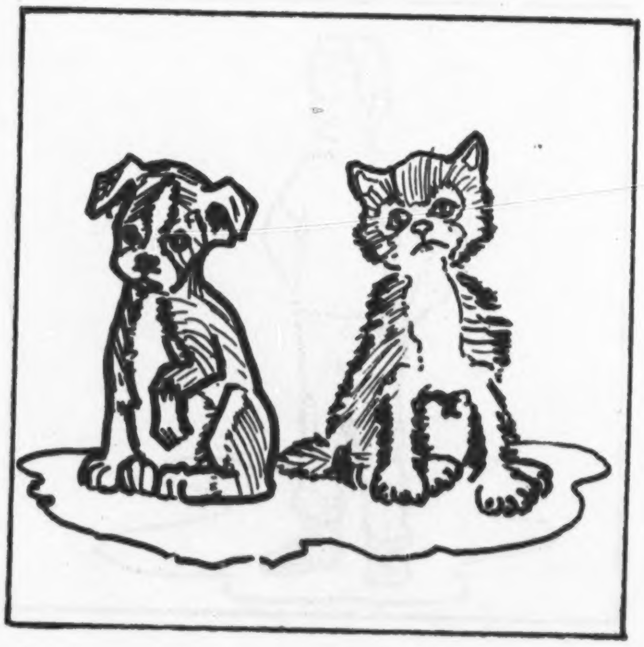












RESEARCH PROJECT #2821 Appendix B_3

PHONEMIC PRODUCTION SURVEY

Name ______________________________

School ______________________ Date ______________

Response Stimulated

1. ___ r e d
2. ___ y e l o w
3. ___ g r i y n
4. ___ p ə r p ə l
5. ___ o r ɨ n ǰ
6. ___ b l u w
7. ___ b l æ k
8. ___ b r a w n
9. ___ w ə n
10. ___ t u w
11. ___ θ r i y
12. ___ f o r
13. ___ f a y v
14. ___ s i k s
15. ___ s e v ə n
16. ___ e y t
17. ___ n a y n
18. ___ t e n
19. ___ b e y s b ɔ l
20. ___ š i p
21. ___ č i m n i y
22. ___ h æ ŋ k ə r č i f
23. ___ v e ǰ t ə b ə l z
24. ___ w e b
25. ___ d ɔ g
26. ___ θ ə m
27. ___ k i ŋ
28. ___ m æ g n ə t
29. ___ ǰ æ k -ə- l æ n t ə r n
30. ___ g o l d f i š

Response Stimulated

31. ___ s æ n w i č
32. ___ m a w θ
33. ___ g r æ s h a p ə r
34. ___ t u w θ b r ə š
35. ___ f e đ ə r
36. ___ d r e s
37. ___ k r e y ə n z
38. ___ z i y b r ə
39. ___ k l o z p i n
40. ___ t e l ə v i ž ə n
41. ___ g ə r a ž ~ ǰ
42. ___ h æ ŋ ə r
43. ___ l i y f
44. ___ f l æ š l a y t
45. ___ h w i s ə l
46. ___ s t e r z
47. ___ s w i ŋ z
48. ___ t r i y
49. ___ s k ə r t
50. ___ f e n t s
51. ___ b u k
52. ___ s n e y k
53. ___ b o y
54. ___ f r u w t
55. ___ h u k
56. ___ c a r
57. ___ b e r
58. ___ b i r d
59. ___ s p u w n
60. ___ đ æ t

	Unstimulated	Stimulated
Vocabulary (60)	___	___
Consonants (66)	___	___
Blends (24)	___	___
Vowels (31)	___	___
Total Phonemic Production	___	___

Mark with X if response was stimulated.

Appendix B_3

PHONEMIC PRODUCTION SURVEY
Individual Recording Sheet, USOE 2821

Name ____________________

School ____________________ Date ____________________

1. red ____________________
2. yellow ____________________
3. green ____________________
4. purple ____________________
5. orange ____________________
6. blue ____________________
7. black ____________________
8. brown ____________________
9. one ____________________
10. two ____________________
11. three ____________________
12. four ____________________
13. five ____________________
14. six ____________________
15. seven ____________________
16. eight ____________________
17. nine ____________________
18. ten ____________________
19. baseball ____________________
20. ship ____________________
21. chimney ____________________
22. handkerchief ____________________
23. vegetables ____________________
24. web ____________________
25. dog ____________________
26. thumb ____________________
27. king ____________________
28. magnet ____________________
29. jack-o'-lantern ____________________
30. goldfish ____________________
31. sandwich ____________________
32. mouth ____________________
33. grasshopper ____________________
34. toothbrush ____________________
35. feather ____________________
36. dress ____________________
37. crayons ____________________
38. zebra ____________________
39. clothespin ____________________
40. television ____________________
41. garage ____________________
42. hanger ____________________
43. leaf ____________________
44. flashlight ____________________
45. whistle ____________________
46. stairs ____________________
47. swings ____________________
48. tree ____________________
49. skirt ____________________
50. fence ____________________
51. book ____________________
52. snake ____________________
53. boy ____________________
54. fruit ____________________
55. hook ____________________
56. car ____________________
57. bear ____________________
58. beard ____________________
59. spoon ____________________
60. that ____________________

Items missed:

Consonants ____________________

Consonant clusters ____________________

Vowels ____________________

Total errors ____________________

Mark with X if response was stimulated.

Appendix B_3

Research Project #2821
Group ___

PHONEMIC PRODUCTION SURVEY
ANALYSIS OF ERRORS

Name___________________ Class___________ Date__________

Consonants

p-___	-p-___	-p___	b-___	-b-___	-b___	t-___	-t-___	-t___
d-___	-d-___	-d___	k-___	-k-___	-k___	g-___	-g-___	-g___
č-___	-č-___	-č___	ǰ-___	-ǰ-___	-ǰ___	f-___	-f-___	-f___
v-___	-v-___	-v___	θ-___	-θ-___	-θ___	đ-___	-đ-___	
h-___	-h-___		s-___	-s-___	-s___	z-___	-z-___	-z___
š-___	-š-___	-š___		-ž-___	-ž___	l-___	-l-___	-l___
m-___	-m-___	-m___	n-___	-n-___	-n___		-ŋ-___	-ŋ___
w-___	-w-___		r-___	-r-___	-r___	y-___	-y-___	

Total Possible 66 Score ___ ___%

Consonant clusters

sk-___ sn-___ sw-___ sp-___ st-___ br-___ bl-___ kr-___ kl-___ fr-___
fl-___ gr-___ tr-___ θr-___ dr-___ hw-___
-br-___ -ks___ -nts___ -ŋz___ -lz___ -rz___ -nz___ -rt___

Total Possible 24 Score ___ ___%

Vowels

Before Voiced Consonants

i___ e___ o___ a___ ɔ___ æ___ ə___ iy___ ay___ aw___

Before Voiceless Consonants

i___ e___ u___ a___ æ___ ə___ uw___ iy___ ey___ ay___ aw___

Before /r/

o___ a___ ə___ i~iy___ e~ey___

Final Position

ə___ iy___ uw___ ow___ oy___

Total Possible 31 Score ___ ___%

Total Possible 121

No. of Incorrect Responses ___ ___%

Stimulated responses marked in red.

Appendix B$_3$

PHONEMIC PRODUCTION SURVEY
CLASS INVENTORY, USOE 2821

																								Name of Pupil
																								red
																								yellow
																								green
																								purple
																								orange
																								blue
																								black
																								brown
																								one
																								two
																								three
																								four
																								five
																								six
																								seven
																								eight
																								nine
																								ten
																								baseball
																								ship
																								chimney
																								handkerchief
																								vegetables
																								wet
																								dog
																								thumb
																								king
																								magnet
																								jack-o'-lantern
																								goldfish
																								sandwich
																								mouth
																								grasshopper
																								toothbrush
																								crayons
																								zebra
																								clothespin
																								television
																								garage
																								hanger
																								leaf
																								flashlight
																								whistle
																								stairs
																								swings
																								tree
																								skirt
																								fence
																								book
																								snake
																								boy
																								fruit
																								hook
																								car
																								bear
																								beard
																								spoon
																								that

Appendix B_4

TEST RESULTS

FALL, 1964

Linguistic Capacity Index

Vocabulary	___	
Phonology	___	
Grammar	___	
Total		___

Phonemic Production Survey

	Unstimulated	Stimulated
Vocabulary (62)	___	
Consonants (68)	___	___
Blends (24)	___	___
Vowels (26)	___	___
Total	___	___

WINTER, 1965

Habilidad-General

	Group	Individual	English form
Vocabulary	___	___	___
Association	___	___	___
Classification	___	___	___
Nonverbal	___	___	___
Total	___	___	___

Goodenough-Harris Drawing Test (Point Scale)

	Raw Score	Standard Score	Percentile Rank
Man	___	___	___
Woman	___	___	___
Average		___	
Self	___	___	___

SPRING, 1965

Metropolitan Readiness

Word Meaning	___	Total 1-4	___
Sentences	___	Letter Rating	___
Information	___	Total 1-6	___
Matching	___	Letter Rating	___
Numbers	___	Percentile Rank	___
Copying	___		

Linguistic Capacity Index

Vocabulary	___	
Phonology	___	
Grammar	___	
Total		___

Phonemic Production Survey

	Unstimulated	Stimulated
Vocabulary (60)	___	
Consonants (66)	___	___
Blends (24)	___	___
Vowels (31)	___	___
Total	___	___

Habilidad-General

Vocabulary		___
Association	___	
Classification	___	
Nonverbal		___
Total		___

USOE Research Project #2821 - Teacher Data on Pupil

A Linguistic Approach to Teaching English
as a Second Language in the Kindergarten

No. ______ Group __________ Name ____________________

Teacher __________________ Class ____________________

Sex ____ Birthdate __________ Birthplace __________________

Father's Birthplace____________ Mother's Birthplace ____________

No. of Children______________ Ordinal Rank ________________

Entered ______ Left ______ Days Present 9/14/64--5/14/65__________

HOUSING

_____ (1) Shack or substandard house in slum area.
_____ (2) Deteriorating area with marginal housing.
_____ (3) Home in average residential area of well-kept property, neat but of moderate cost.
_____ (4) Better than average homes or apartments but short of luxury.
_____ (5) Private, large, well-kept home or "luxury" apartment in preferred residential area.

HOME LANGUAGE

_____ (1) Both parents use Spanish almost exclusively with children.
_____ (2) One parent uses Spanish and the other uses English with children.
_____ (3) Both parents use Spanish and English more than casually with children.
_____ (4) Both parents use English almost exclusively with children.

CHILD'S USE OF SPANISH

_____ (1) Little or no facility in Spanish.
_____ (2) Able to understand simple directions but unable to carry on a conversation.
_____ (3) Able to carry on a conversation.

CHILD'S USE OF ENGLISH

Sept.		May
_____	(1) Little or no facility in English.	_____
_____	(2) Able to understand simple directions but unable to carry on a conversation.	_____
_____	(3) Able to carry on a conversation.	_____

Appendix C_2

USOE RESEARCH PROJECT #2821

HOME INTERVIEW

Name of pupil ______________________________
Address ______________________________
School ______________ Interviewer ______________
Date of interview ______________________________

____

A. CHILD'S USE OF SPANISH

_____ (1) Little or no facility in Spanish.
_____ (2) Able to understand simple directions but unable to carry on a conversation.
_____ (3) Able to carry on a conversation.

B. CHILD'S USE OF ENGLISH

_____ (1) Little or no facility in English.
_____ (2) Able to understand simple directions but unable to carry on a conversation.
_____ (3) Able to carry on a conversation.

C. HOUSING

_____ (1) Shack or substandard house in slum area.
_____ (2) Deteriorating area with marginal housing.
_____ (3) Home in average residential area of well-kept property, neat but of moderate cost.
_____ (4) Better than average homes or apartments but short of luxury.
_____ (5) Private, large, well-kept home or "luxury" apartment in preferred residential area.

D. HOME LANGUAGE

_____ (1) Both parents use Spanish almost exclusively with children.
_____ (2) One parent uses Spanish and the other uses English with children.
_____ (3) Both parents use Spanish and English more than casually with children.
_____ (4) Both parents use English almost exclusively with children.

USOE RESEARCH PROJECT # 2821

HOME INTERVIEW (Continued)

E. EDUCATION OF THE PARENT OR THE HEAD OF FAMILY WHO SEEMS TO INFLUENCE MOST THE STATUS OF THE FAMILY

______ (1) Completed less than 8 years of elementary school.

______ (2) Completed 8th grade but less than senior high school.

______ (3) Completed senior high school.

______ (4) Completed a year or more of college work.

______ (5) Attended graduate or professional school at least one year.

F. OCCUPATION OF PARENT PROVIDING MOST SUPPORT

______ (1) Unemployed (not retired), on relief, odd jobs only, work giving very low wages, etc.

______ (2) Low income but regular work, waiters, farm laborers, semi-skilled work, etc.

______ (3) Skilled labor, carpenter, police, fireman, small business. electrician, small landowner, salesman, foreman, etc.

______ (4) Teachers, librarians, smaller businesses, managers, supervisors, registered nurse, etc.

______ (5) Professions and high-income occupations: lawyer, physician, engineer, college professor, school administrator, large business proprietor or large landowner, executive in corporation or bank, editor, CPA, etc.

Class Inventory
USOE 2821

UNIT I
SOUND PRODUCTION CHECK LIST

KEY: -b = initial /b/
-b- = medial /b/
b- = final /b/

	b-	-b-	-b	v-	-v-	-v	š-	-š-	-š	č-	-č-	-č	θ-	-θ-	-θ	đ-	-đ-	-đ	-ŋ-	-ŋ

Appendix D$_2$

UNIT I, USOE 2821
PUPIL EVALUATION

A. SOUND PRODUCTION CHECK LIST

During the review lessons or other activities listen to individual students produce the sounds emphasized in Unit I. Check each sound as you hear the student use it correctly. Write in any other sound the student substitutes for the correct one.

B. TEST FOR SOUND RECOGNITION

Ask the students to mark twelve pictures (one in each row) to test their ability to hear the sounds presented and contrasted in Unit I.

Put each child's name on a test, provide him with a pencil or crayon for marking, and give the following directions:

1. Put your finger on the 1 (show each number on a flash card or chalk board so the children may match it).
   In this row are a bell, a bed, and a valentine.
   Mark the picture that begins with /v/, as vase.

2. Put your finger on the 2.
   In this row are cheese, a shell, and a shovel.
   Mark the picture that begins with /č/, as chair.

3. Put your finger on the 3.
   In this row are a flower, thread, and a tree.
   Mark the picture that begins with /θ/, as three.

4. Put your finger on the 4.
   In this row are a mother, a seven, and a candle.
   Mark the picture that has /đ/ in the middle, as feather.

5. Put your finger on the 5.
   In this row are a table, a shovel, and a rabbit.
   Mark the picture that has /v/ in the middle, as oven.

6. Put your finger on the 6.
   In this row are dishes, a handkerchief, and matches.
   Mark the picture that has /š/ in the middle, as brushes.

7. Put your finger on the 7.
   In this row are a web, a bib, and a glove.
   Mark the picture that ends with /v/, as stove.

8. Put your finger on the 8.
In this row are a branch, a fish, and a dish.
Mark the picture that ends with /č/, as watch.

9. Put your finger on the 9.
In this row are a basket, a toothbrush, and a feather.
Mark the picture that has /θ/ in the middle, as birthday.

10. Put your finger on the 10.
In this row are a mouth, a leaf, and a bat.
Mark the picture that ends with /θ/, as bath.

11. Put your finger on the 11.
In this row are ink, sing, and sink.
Mark the picture that ends with /ŋ/, as king.

12. Put your finger on the 12.
In this row are a wing, wink, and sing.
Mark the picture that ends with /ŋk/, as rink.

This test given at the beginning of Unit I will indicate to the teacher which sounds each student cannot hear or produce. Students not able to hear the difference between /b/ and /v/ should be chosen to participate in many of the activities in Lessons 1-5 which emphasize these sounds. Similar use should be made of all the diagnostic test results.

This test given at the completion of Unit I will indicate the progress each student has made in hearing and producing the sounds emphasized in this unit The teacher should begin Unit II even though many of the students have not mastered the sounds of Unit I. The language activities from Unit I should be continued, however, as review as time and student needs dictate.

Appendix E_1

CLASSROOM PROCEDURES

USOE 2821

The Daily Language Lesson

I. Small group instruction. (10 minutes)
  a. Lessons 61-120.

II. Whole group instruction. (20 minutes)
  a. "For the entire class:" Lessons 61-120.
  b. Review from Lessons 1-60.
  c. Other language experiences.

Suggested Daily Schedule

	Minutes
Opening Activities	15
Work Period (work with small language group during this time)	40
Clean up	5
Outdoor Activity	20
Milk and Rest (or group instruction, social studies, science, number concepts, etc.)	20
Music and Rhythms	20
Language (entire class)	20
Other (Show and Tell, stories)	10
Total	150

How to Work with a Small Group

1. Give specific directions to the entire class at the beginning of the work period.

2. Have all materials they are to work with prepared in advance.

3. Keep the small group with you for instruction a maximum of 10 minutes to begin with.

4. No child in the room should change his activity during that time. (If he has a puzzle, clay, or pegboard he may not return it for something else for 10 minutes.)

5. Do not help other children with puzzles or accept other interruptions from them for that short period.

6. Signal the children in some way when they may change activities and when you are again available to them.
    a. Move from circle
    b. Dismiss small group
    c. Ring bell

7. Later, if desired, one to three additional groups may be called to the circle during this work period. Add these groups gradually as attention span and group discipline, develops. (These additional groups would not be for language instruction, but for teaching letters, phonics, or other readiness skills which require ability grouping.)

Suggested Activities for the rest of the class:

a. Coloring
b. Clay
c. Pegs
d. Beads
e. Puzzles
f. Cutting and Pasting
g. Ditto papers on likenesses and differences
h. Work papers which reinforce letter knowledge (Clovis)

(Omit paint, blocks, doll corner, and other activities which require close supervision or a lot of noise while you are working with a small group.)

Appendix E_2

SCHEDULE OF DAILY LESSON PLANS

USOE RESEARCH PROJECT 2821

September, 1964

		1	2	3	4 Workship Wilson 9-4	5 Workshop Cole School 9-4 (Clovis Teachers)
6	7 Labor Day	8 Instruction begins, Clovis Workshop Wilson School 9-4	9	10	11	12
13	14 Instruction begins, Sanger, Malaga, Lone Star	15	16	17	18	19
20	21	22	23	24	25	26
27	28 Lesson 1 Introduce /b/	29 Lesson 2 Introduce /v/	30 Lesson 3 Constrast /b/ with /v/			

USOE RESEARCH PROJECT 2821

October, 1964

				1 Lesson 4 Contrast /b/ and /v/	2 Lesson 5 Contrast /v/ and /b/	3
4	5 Lesson 6 Introduce /š/	6 Lesson 7 Introduce /č/	7 Lesson 8 Contrast /š/ and /č/	8 Lesson 9 Contrast /š/ and /č/	9 Lesson 10 Constrast /š/ and /č/	10
11	12 Columbus Day Lesson 11 Introduce /θ/	13 Lesson 12 Review /θ/	14 Lesson 13 Introduce /đ/	15 Lesson 14 Review /đ/	16 Lesson 15 Contrast /θ/ and /đ/	17
18	19 Lesson 16 Contrast /s/, /f/, /t/, and /θ/ ----------------	20 Lesson 17 Contrast /z/, /v/, /d/, and /đ/ ----------------	21 Lesson 18 Review /θ/ and /đ/ --- Testing ---	22 Lesson 19 Introduce /ʒ/ ----------------	23 Lesson 20 Review /ʒ/ ----------------	24
25	26 ---------------- ----------------	27 ---------------- ----------------	28 --- Review --- --- Testing ---	29 ---------------- ----------------	30 ---------------- ----------------	31

USOE RESEARCH PROJECT 2821

November, 1964

1	2 Lesson 21 Introduce /s/	3 Lesson 22 Introduce /z/	4 Lesson 23 Contrast /s/ and /z/	5 Lesson 24 Contrast /s/ and /z/	6 Lesson 25 Contrast /w/ and /v/	7
8	9 Lesson 26 Introduce /f/	10 Lesson 27 Contrast /f/ and /v/	11 Lesson 28 Contrast /f/ and /v/	12 Lesson 29 Introduce /y/	13 Lesson 30 Contrast /y/ and /ǰ/	14
15	16 Lesson 31 Introduce /t/	17 Lesson 32 Introduce /d/	18 Lesson 33 Contrast /t/ and /d/	19 Lesson 34 Introduce /k/	20 Lesson 35 Introduce /g/	21
22	23 ----------------Review----------------------	24	25	26 Thanksgiving	27	28
29	30 Lesson 36 Contrast /k/ and /g/					

December, 1964

		1 Lesson 37 Contrast /k/ and /g/	2 Lesson 38 Introduce /p/	3 Lesson 39 Contrast /p/ and /b/	4 Lesson 40 Contrast /p/ and /b/	5
6	7 Lesson 41 Initial /s/ Cluster	8 Lesson 42 Initial /s/ Cluster	9 Lesson 43 Final /s/ Cluster	10 Lesson 44 Final /s/ Cluster	11 Lesson 45 /s/ Clusters	12
13	14 ------------	15 ------------	16 --- Review ---	17 ------------	18 ------------	19
20	21	22	23	24 MERRY CH	25 RISTMAS	26 TO ALL !!
27	28	29	30	31		

USOE RESEARCH PROJECT 2821

January, 1965

					1	2
3	4 Lesson 46 Introduce /ə/	5 Lesson 47 Contrast /a/ and /ə/	6 Lesson 48 Contrast /ə/ and /e/	7 Lesson 49 Introduce /æ/	8 Lesson 50 Contrast /a/ and /æ/	9
10	11 Lesson 51 Contrast /i/ and /e/	12 Lesson 52 Contrast /i/ and /iy/	13 Lesson 53 Contrast /e/ and /iy/	14 Lesson 54 Contrast /e/ and /æ/	15 Lesson 55 Contrast /ey/ and /e/	16
17	18 Lesson 56 Contrast /a/ and /ɔ/	19 Lesson 57 Contrast /o/ and /ɔ/	20 Lesson 58 Contrast /o/ and /u/	21 Lesson 59 Contrast /a/ and /uw/	22 Lesson 60 Contrast /u/ and /uw/	23
24 31	25 ------------------------------Review All Sounds ----------------------------	26	27	28	29	30

USOE RESEARCH PROJECT 2821

February, 1965

	1	2	3	4	5	6
7	8 Lesson 61	9 Lesson 62	10 Lesson 63	11 Lesson 64	12 Holiday	13
14	15 Lesson 65	16 Lesson 66	17 Lesson 67	18 Lesson 68	19 Lesson 69	20
21	22 Holiday	23 Clovis Holiday	24 Lesson 70	25 Lesson 71	26 Lesson 72	27
28						

USOE RESEARCH PROJECT 2821

March, 1965

	1 Lesson 73	2 Lesson 74	3 Lesson 75	4 Lesson 76	5 Lesson 77	6
7	8 Lesson 78	9 Lesson 79	10 Lesson 80	11 Lesson 81	12 Lesson 82	13
14	15 Lesson 83	16 Lesson 84	17 Lesson 85	18 Lesson 86	19 Lesson 87	20
21	22 Lesson 88	23 Lesson 89	24 Lesson 90	25 Lesson 91	26 Lesson 92	27
28	29 Lesson 93	30 Lesson 94	31 Lesson 95			

USOE RESEARCH PROJECT 2821

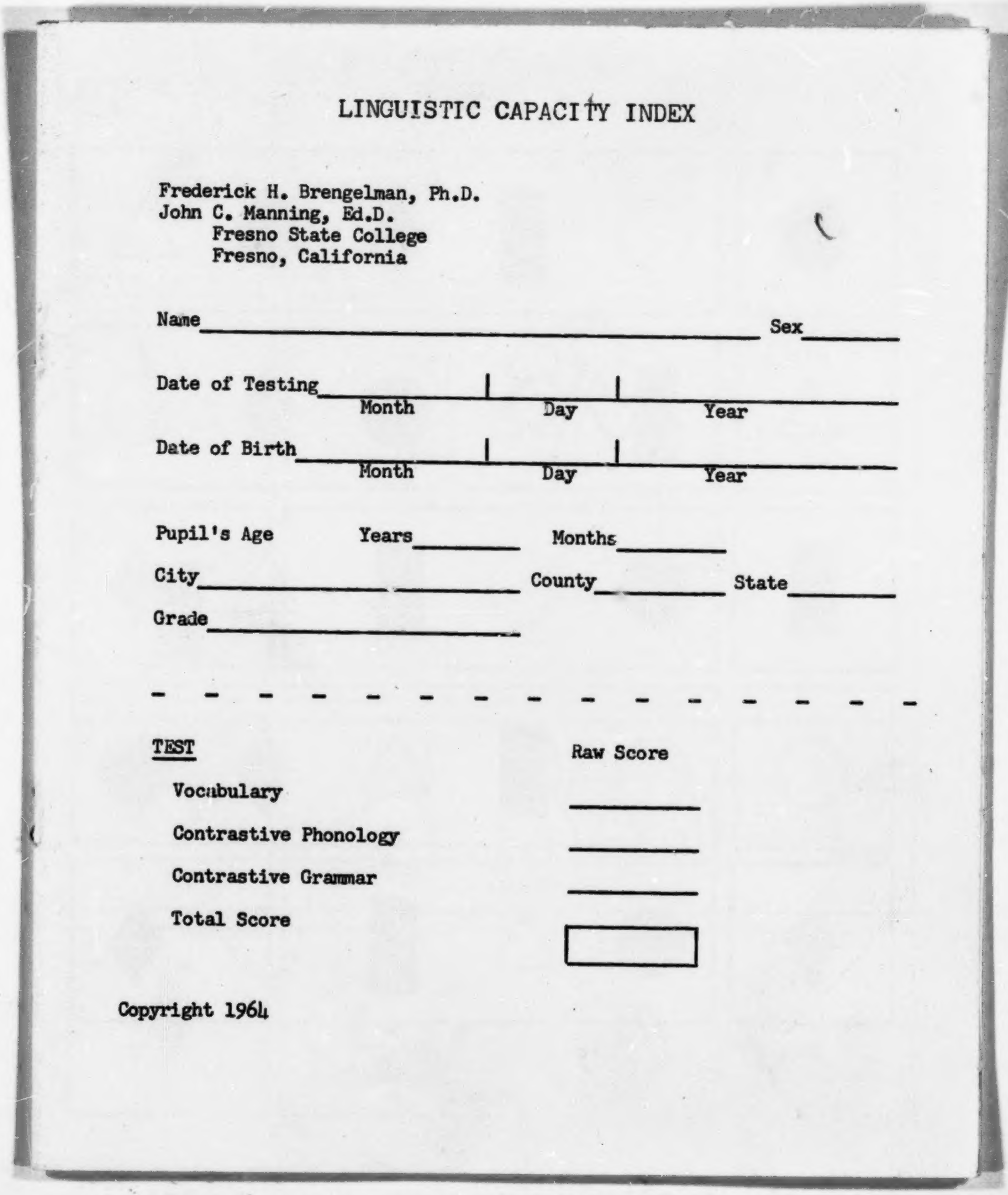
April, 1965

				1 Lesson 96	2 Lesson 97	3
4	5 Lesson 98	6 Lesson 99	7 Lesson 100	8	9	10
11	12 --------------------	13 --------------------	14 -Easter Vacation	15 --------------------	16 --------------------	17
18	19 Lesson 101	20 Lesson 102	21 Lesson 103	22 Lesson 104	23 Lesson 105	24
25	26 Lesson 106 -------------------	27 Lesson 107 -------------------	28 Lesson 108 Public Schools	29 Lesson 109 Week -----------	30 Lesson 110 -------------------	

USOE RESEARCH PROJECT 2821

May, 1965

						1
2	3 Lesson 111	4 Lesson 112	5 Lesson 113	6 Lesson 114	7 Lesson 115	8
9	10 Lesson 116	11 Lesson 117	12 Lesson 118	13 Lesson 119	14 Lesson 120	15
16	17	18	19 Group Testing	20	21	22
23 30	24 31	25	26 Group Testing	27	28	29



LINGUISTIC CAPACITY INDEX

Frederick H. Brengelman, Ph.D.
John C. Manning, Ed.D.
Fresno State College
Fresno, California

Name ______________________________ Sex __________

Date of Testing ________ | ________ | ________
Month Day Year

Date of Birth ________ | ________ | ________
Month Day Year

Pupil's Age Years ________ Months ________

City ______________ County ________ State ________

Grade ______________

- - - - - - - - - - - - - - -

TEST	Raw Score
Vocabulary	________
Contrastive Phonology	________
Contrastive Grammar	________
Total Score	☐

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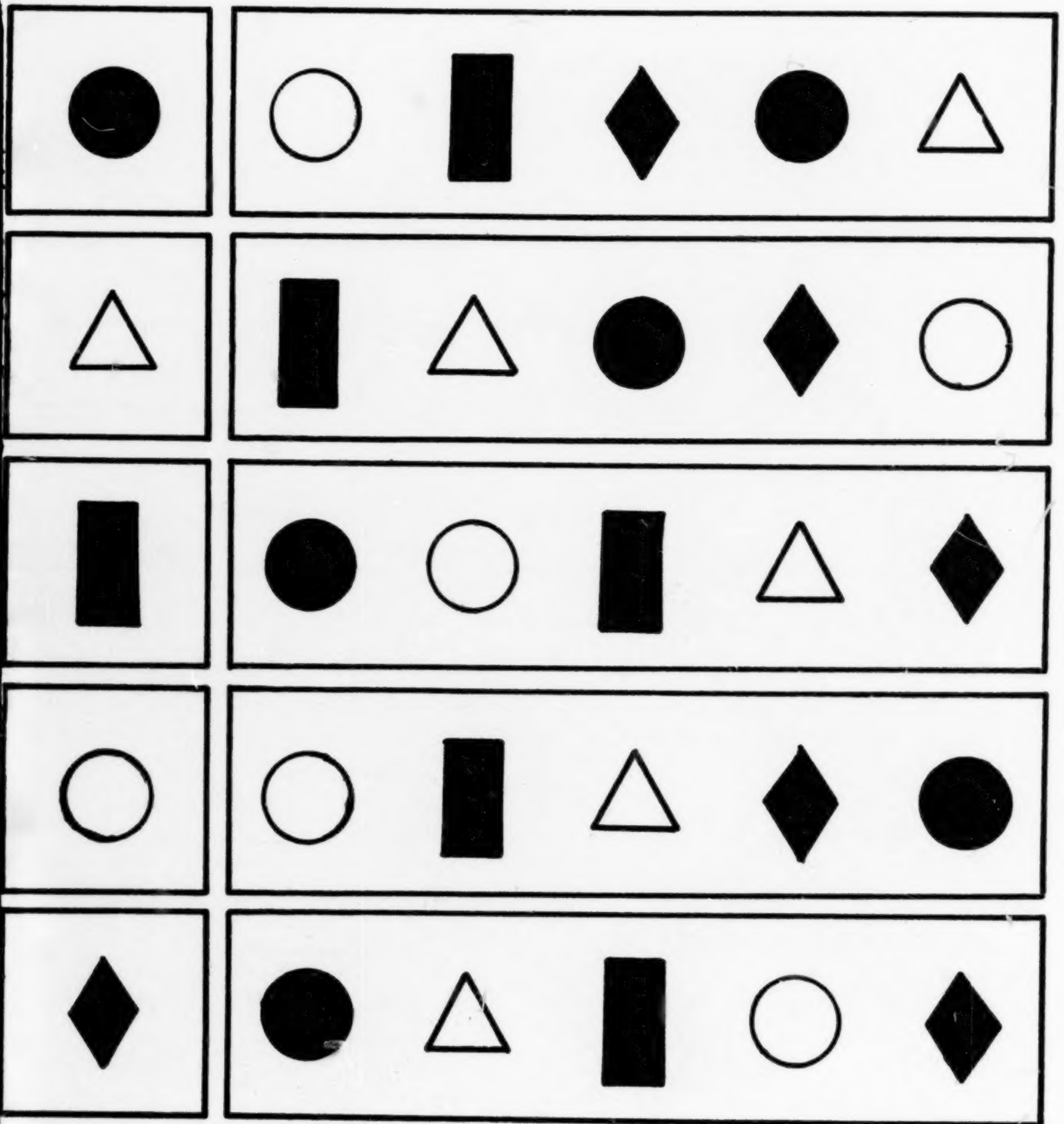
PRETEST



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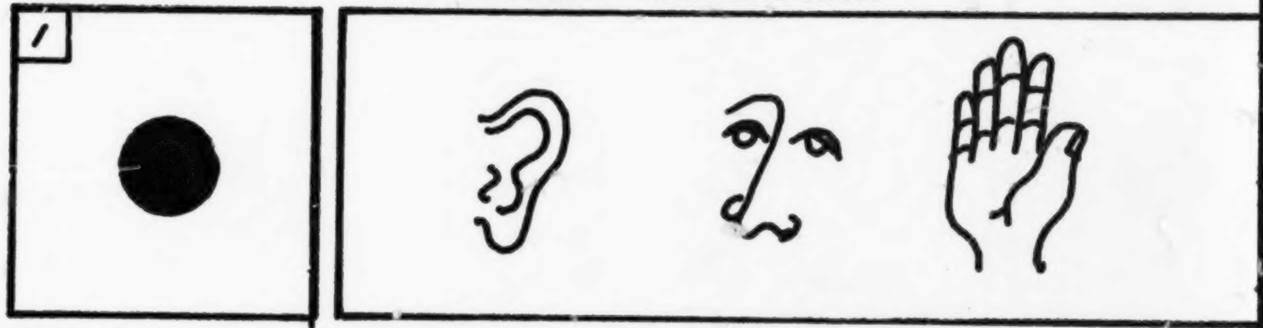

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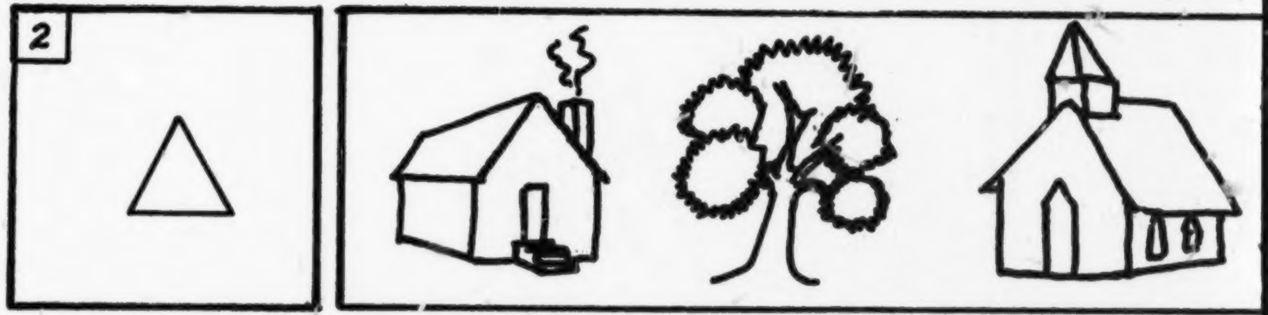

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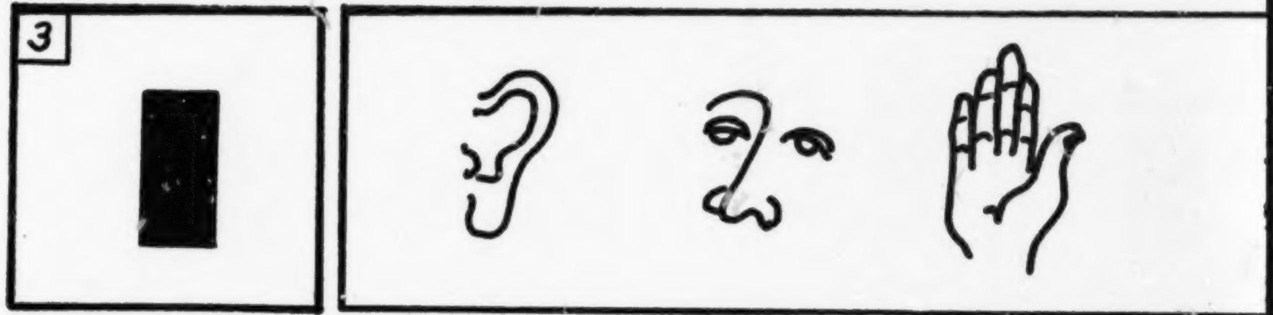

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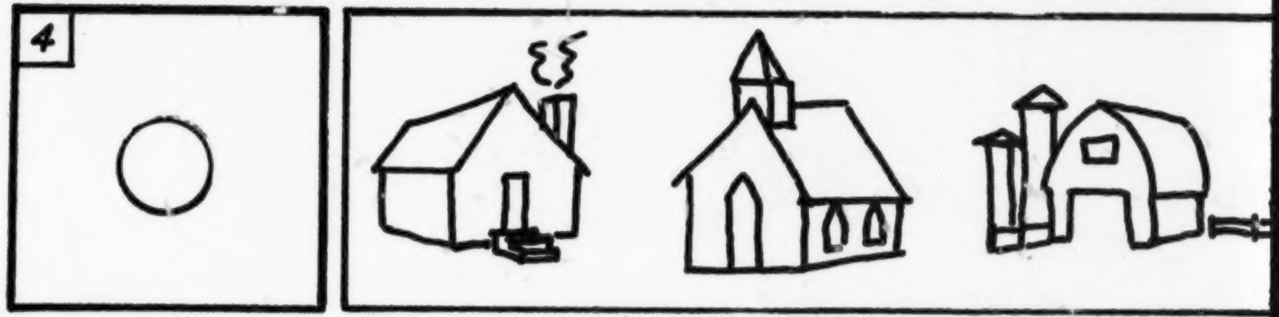

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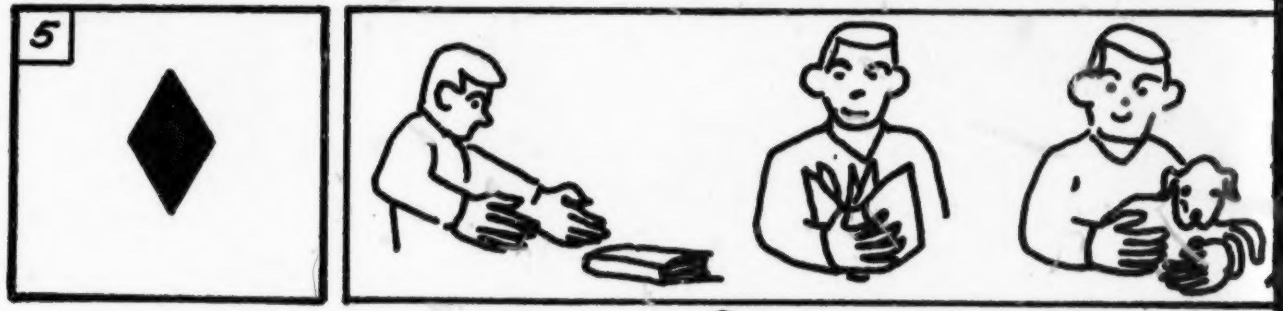

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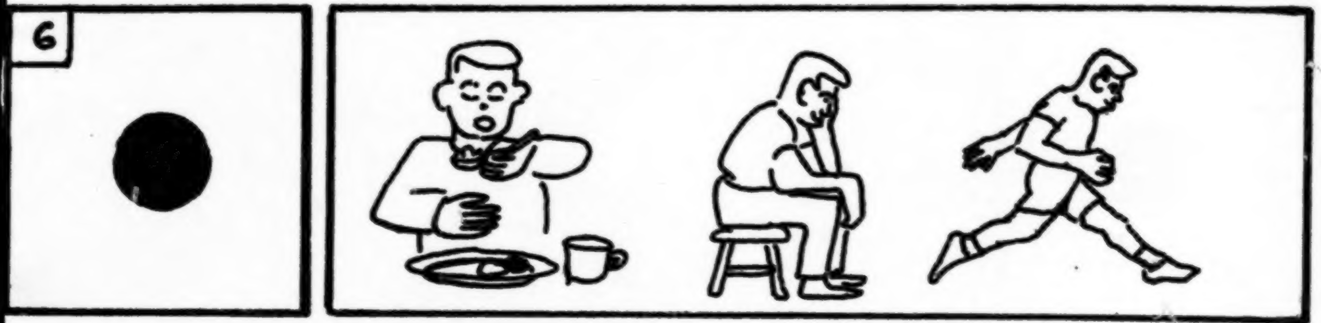

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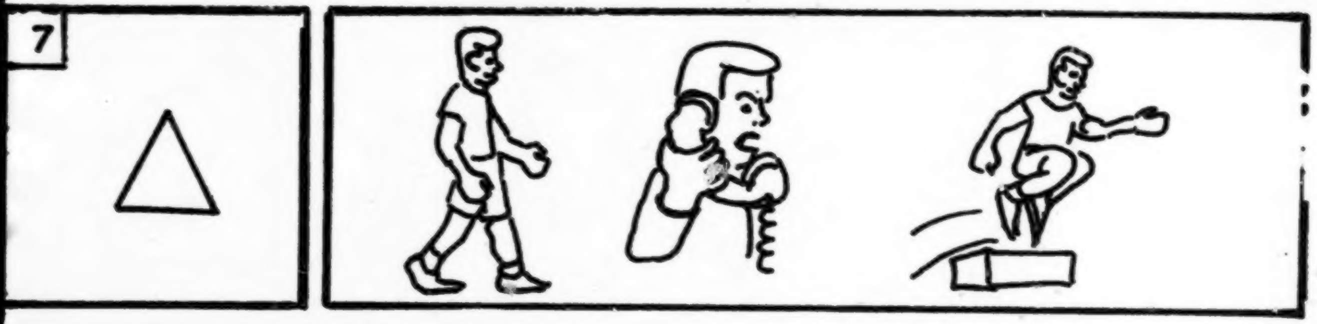

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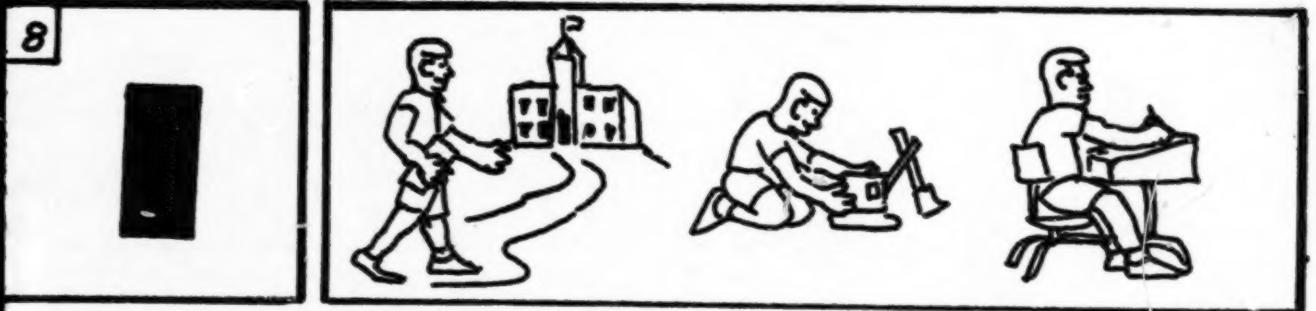

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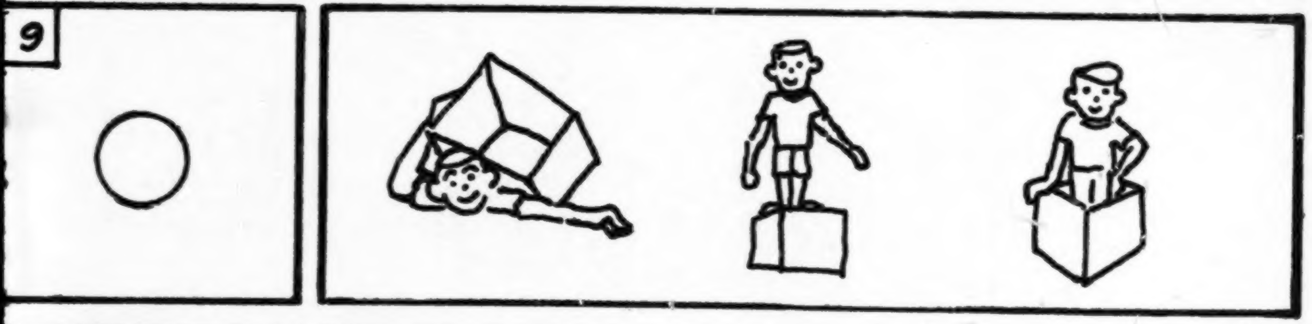

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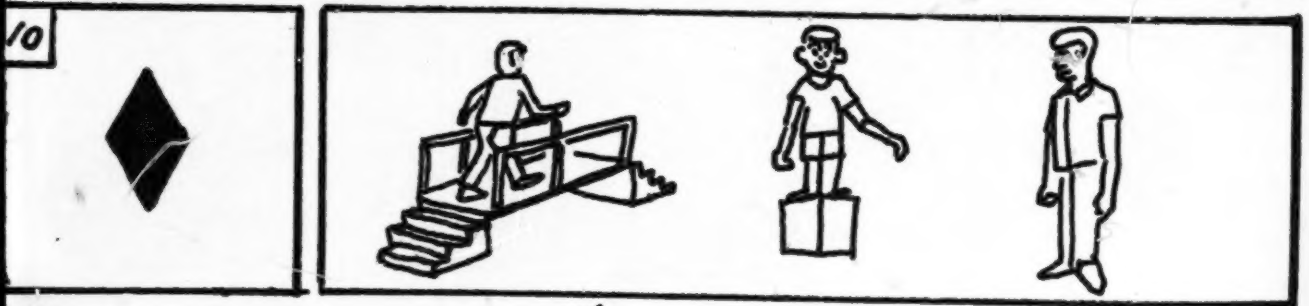

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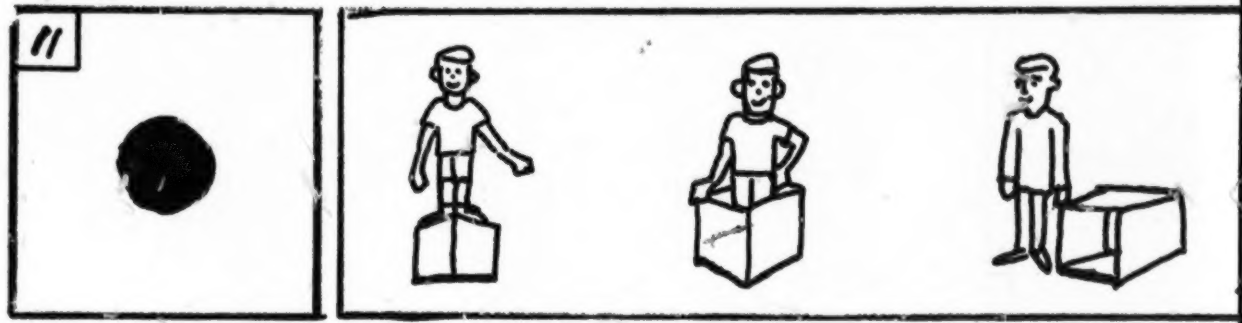

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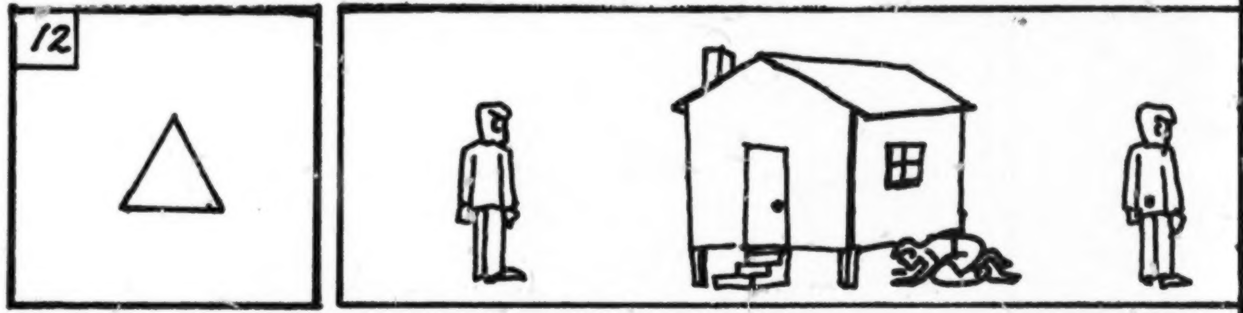

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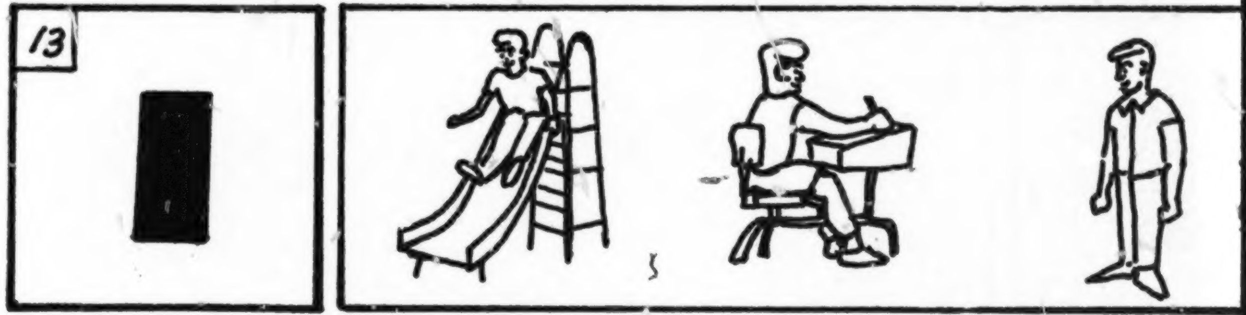

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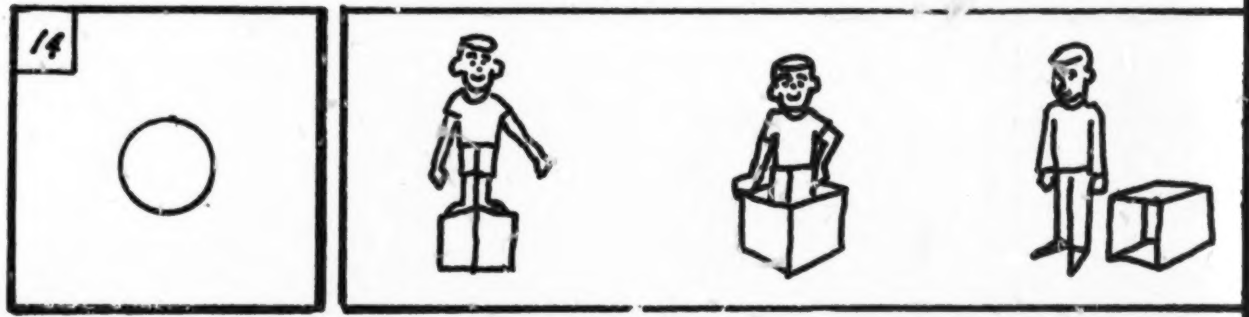

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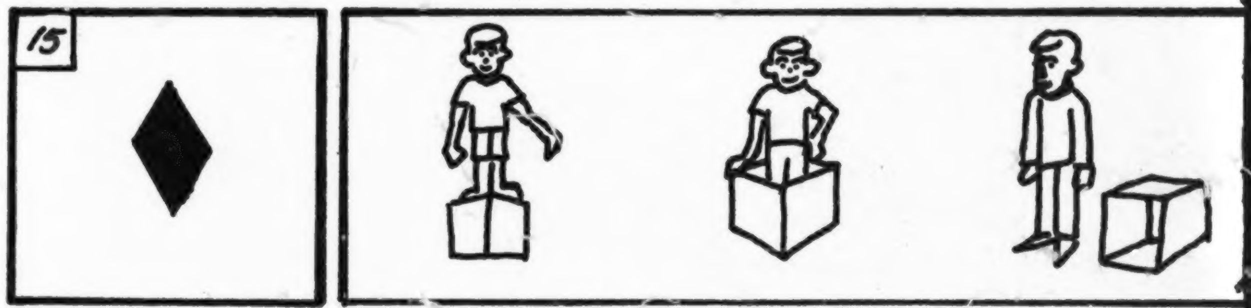

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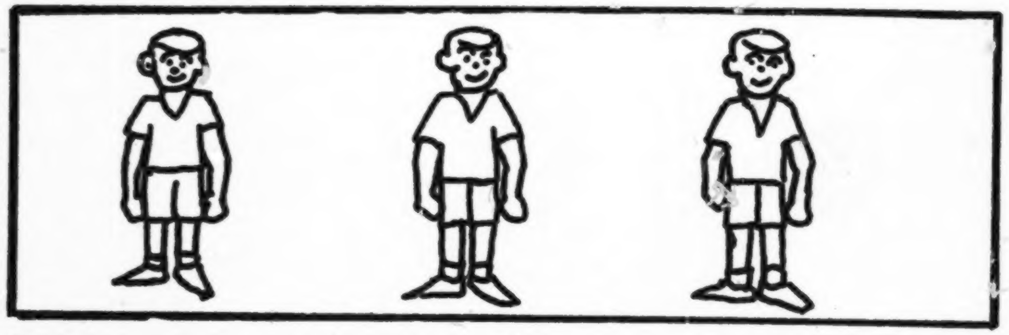

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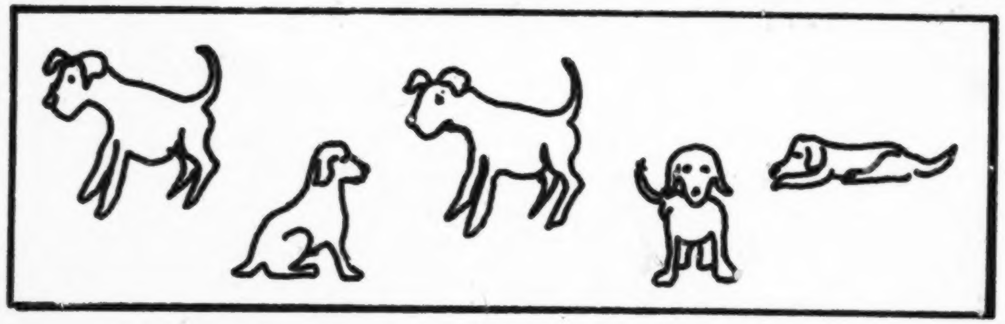

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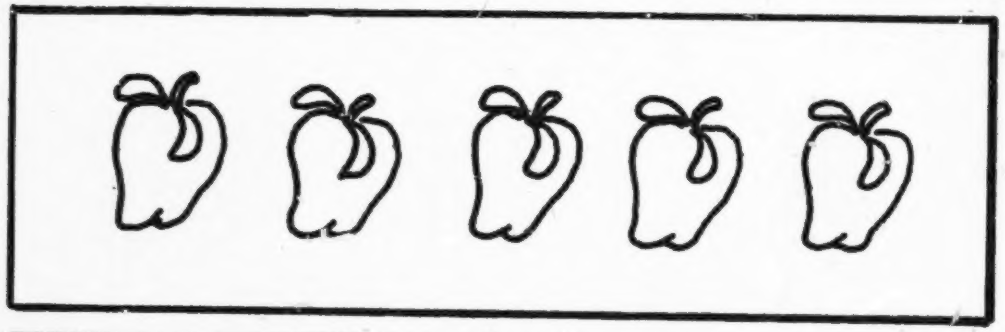

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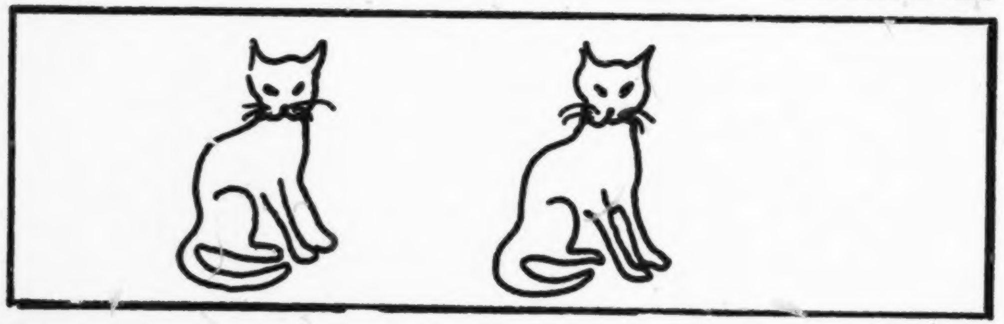

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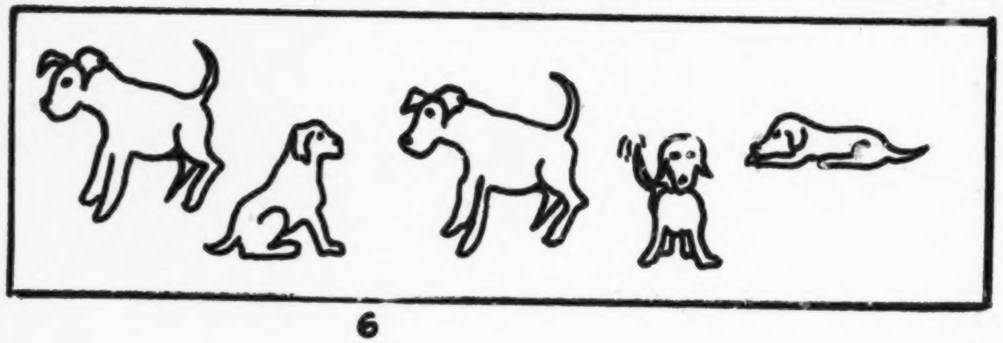

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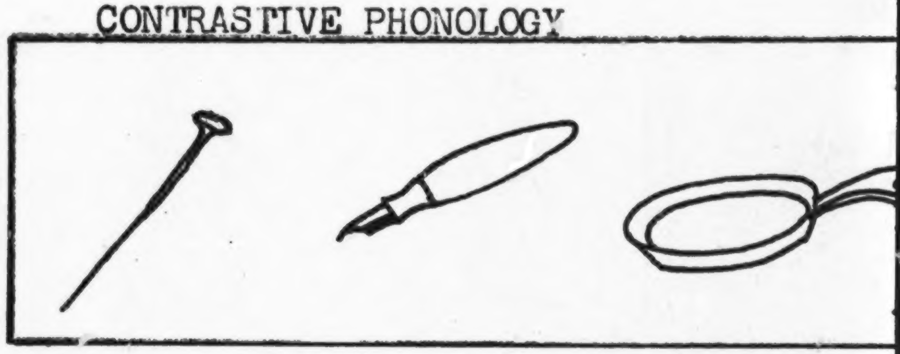

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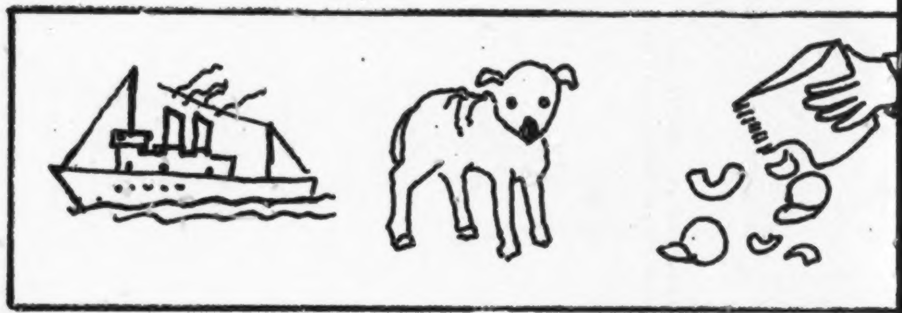

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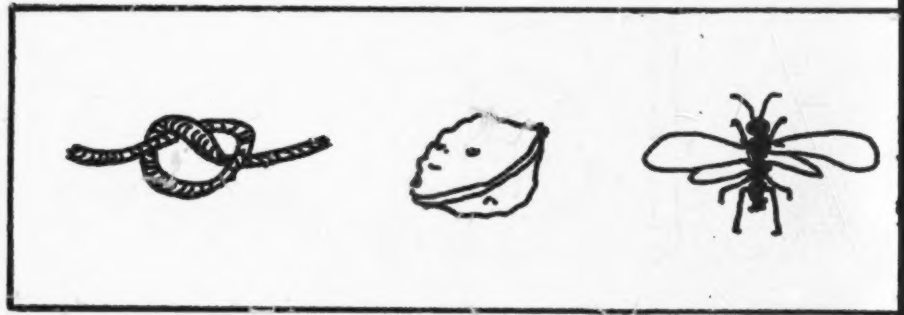

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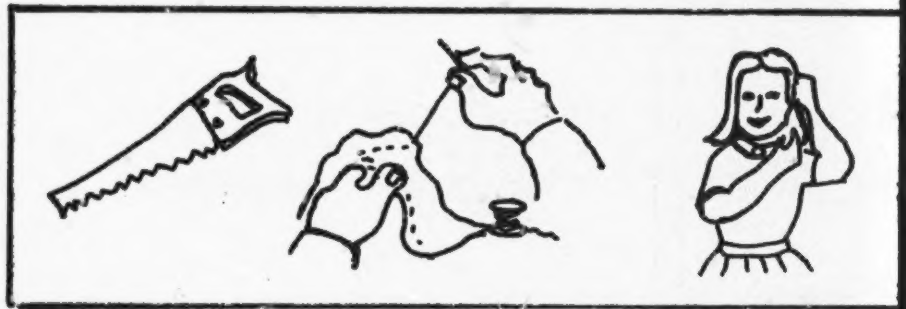

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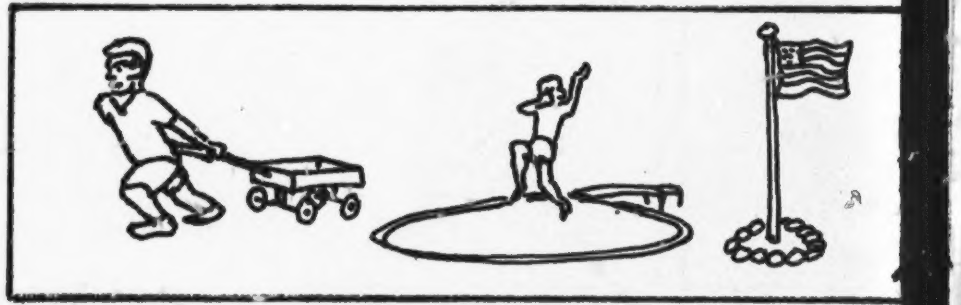

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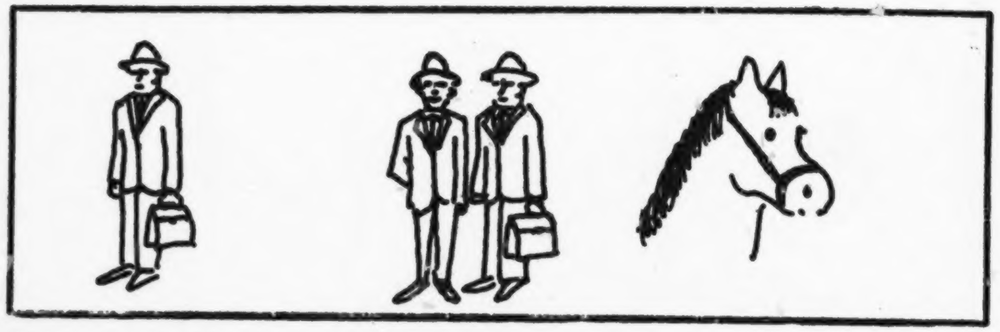

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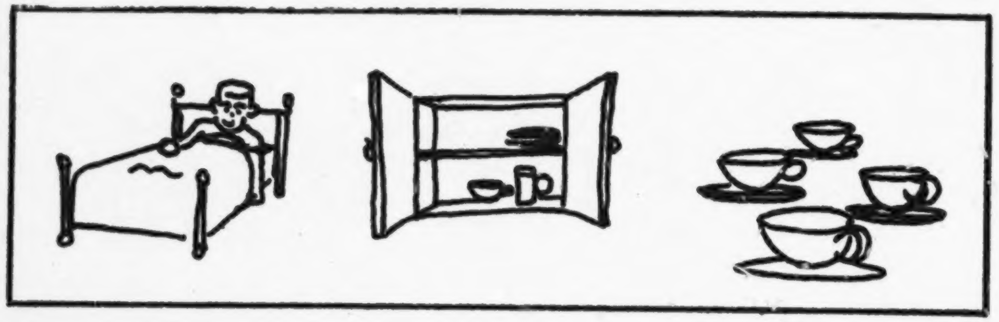

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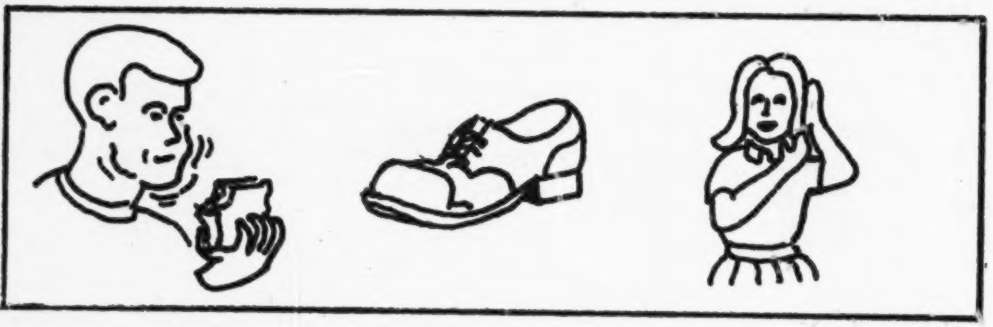

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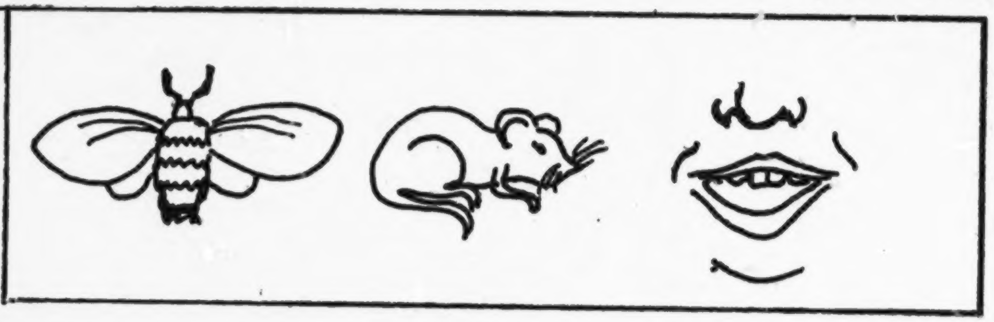

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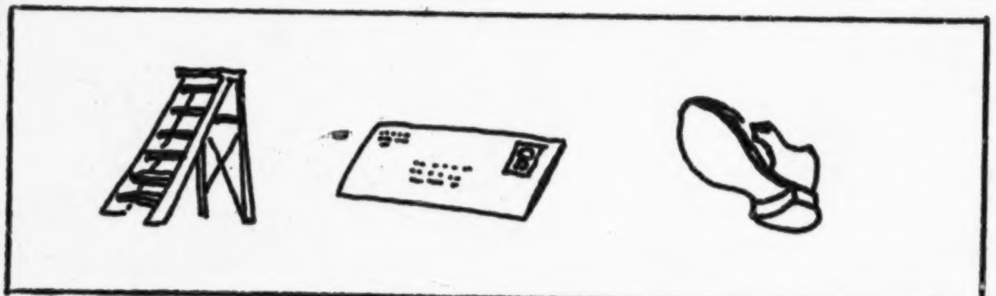

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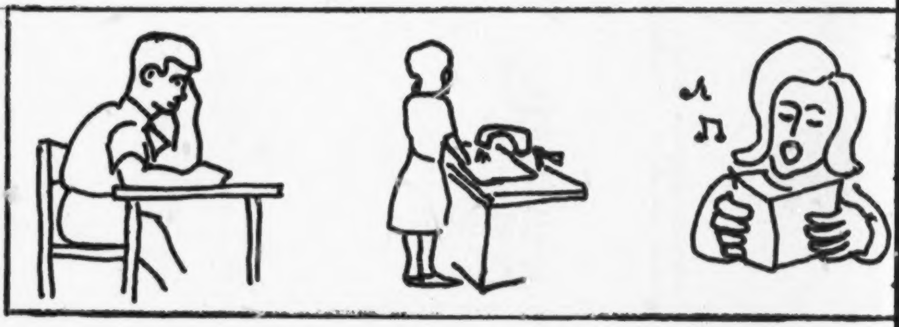

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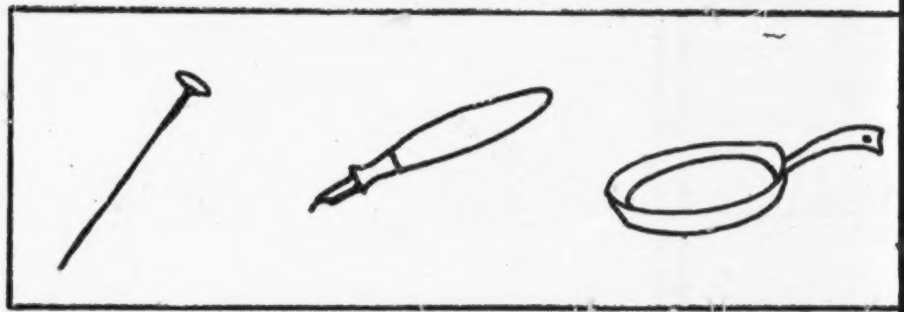

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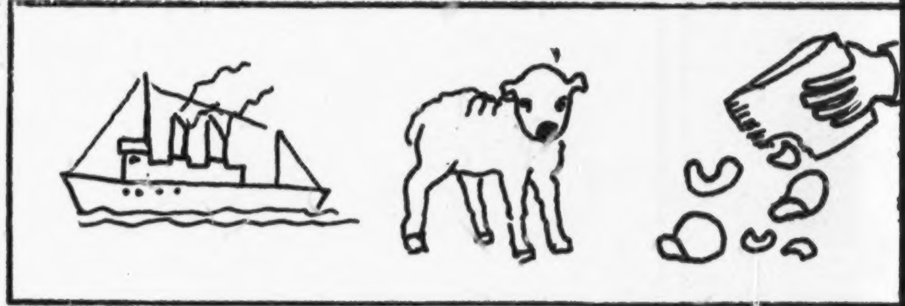

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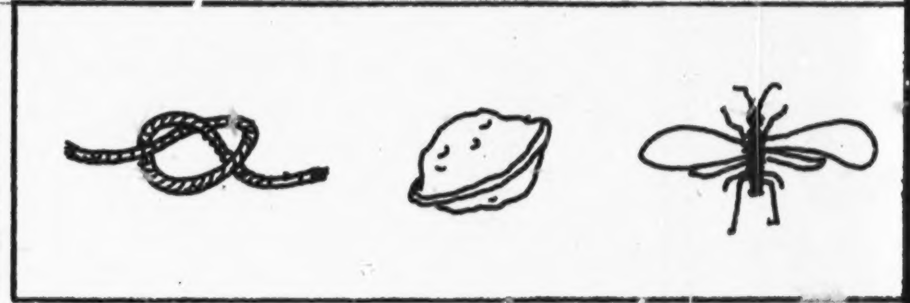

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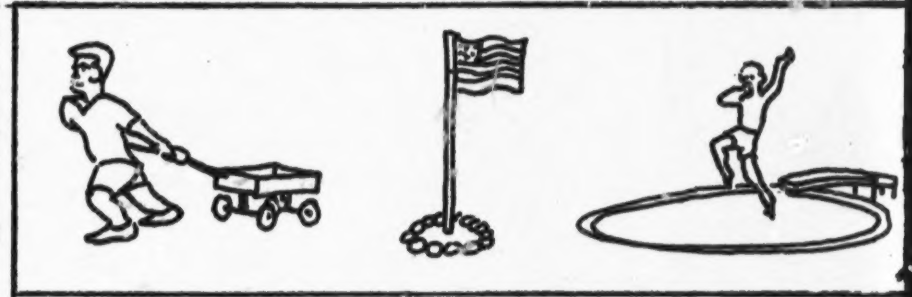

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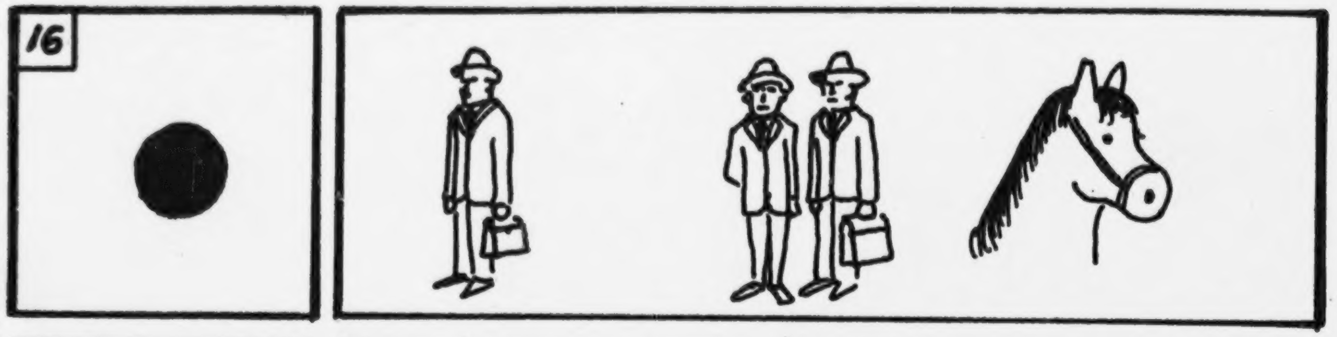

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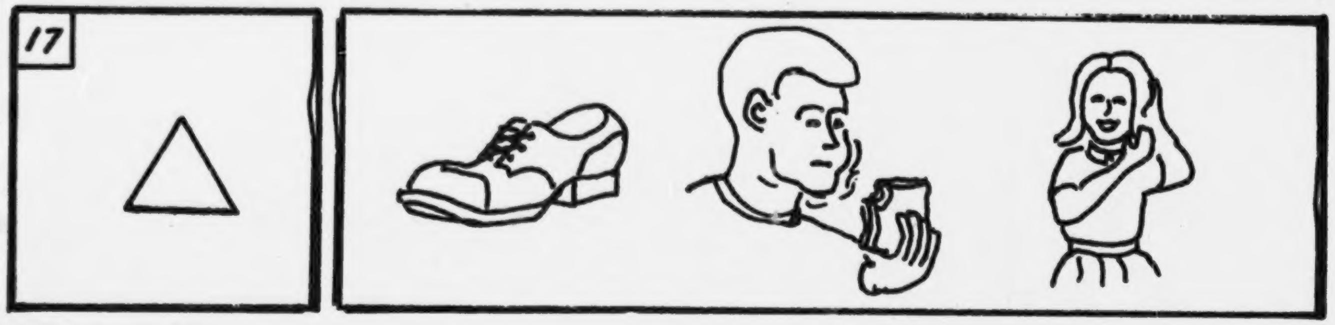

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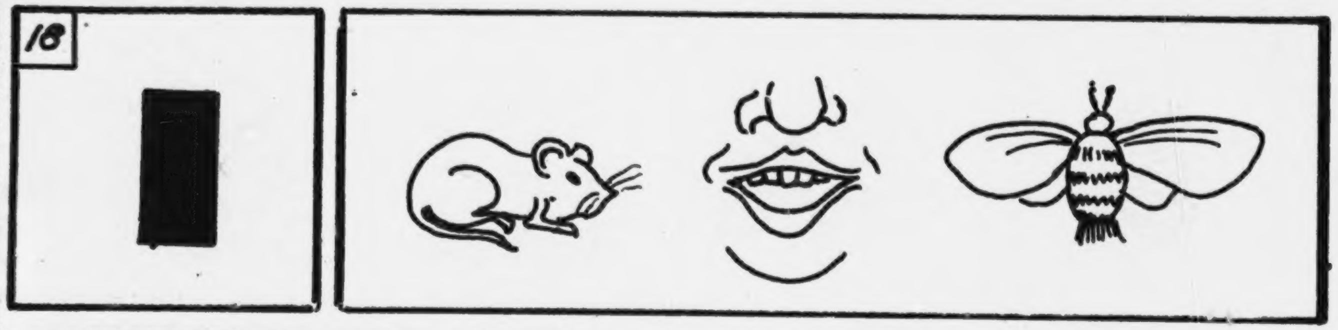

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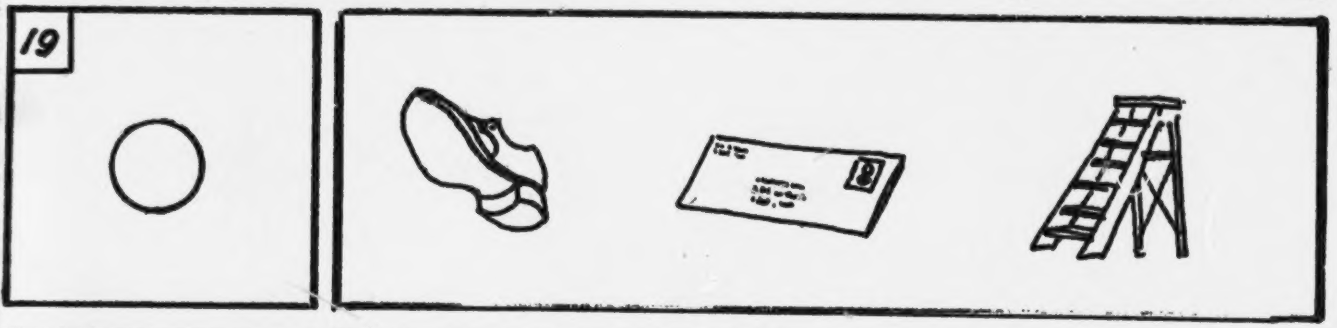

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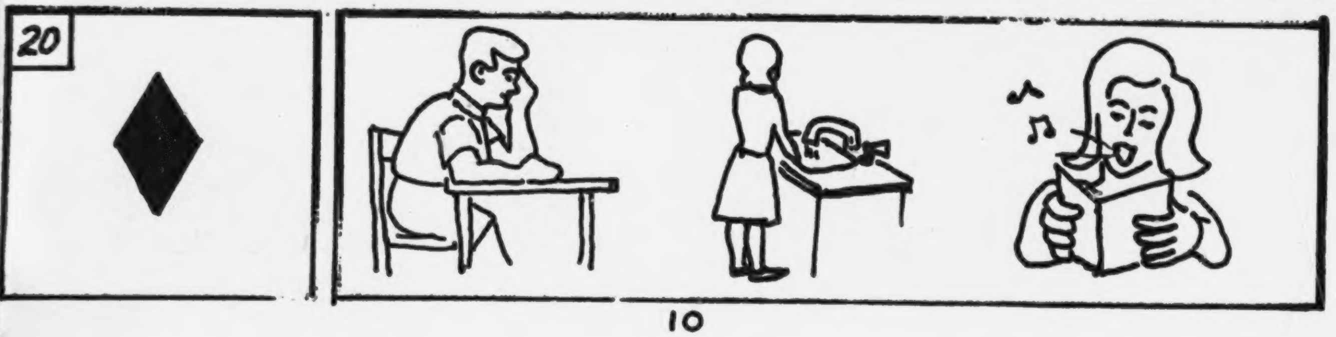

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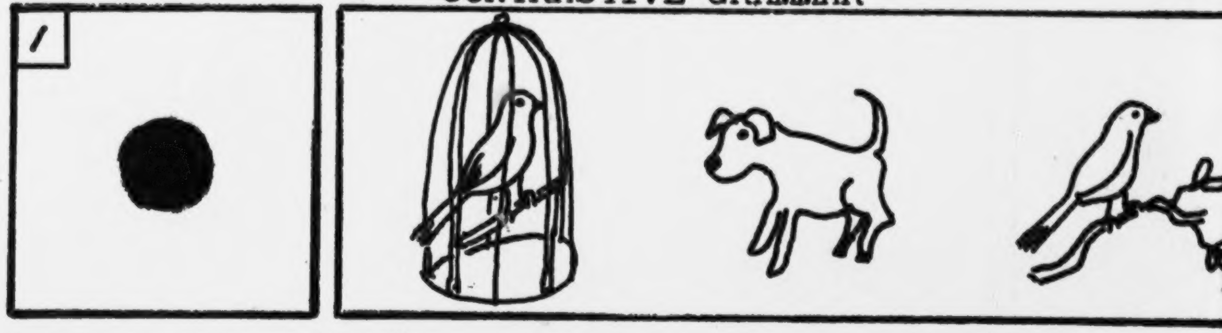

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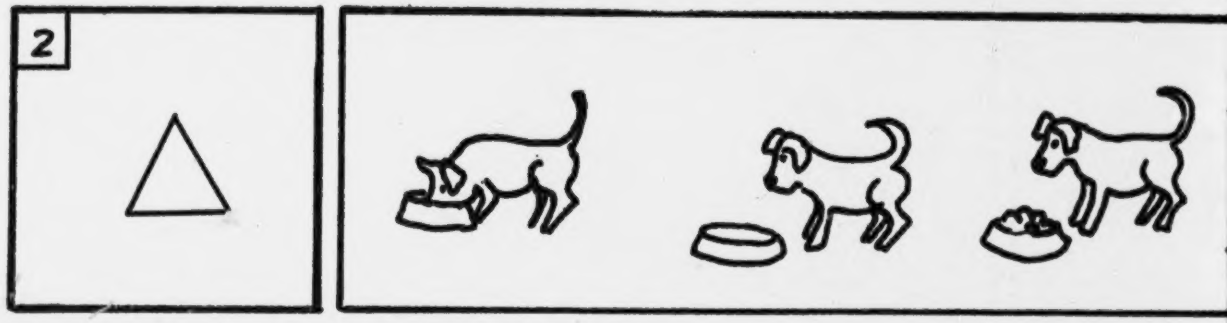

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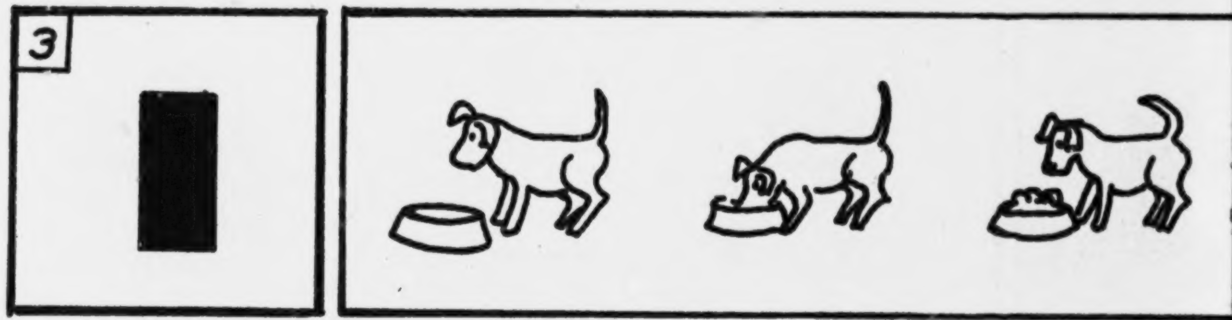

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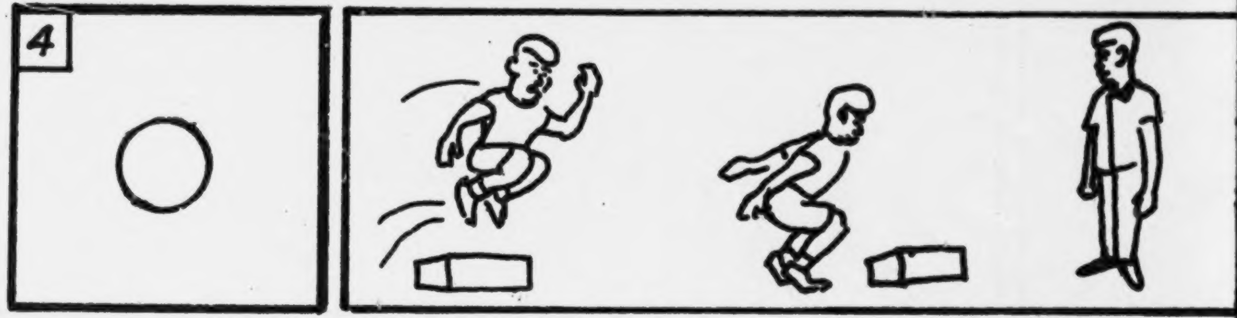

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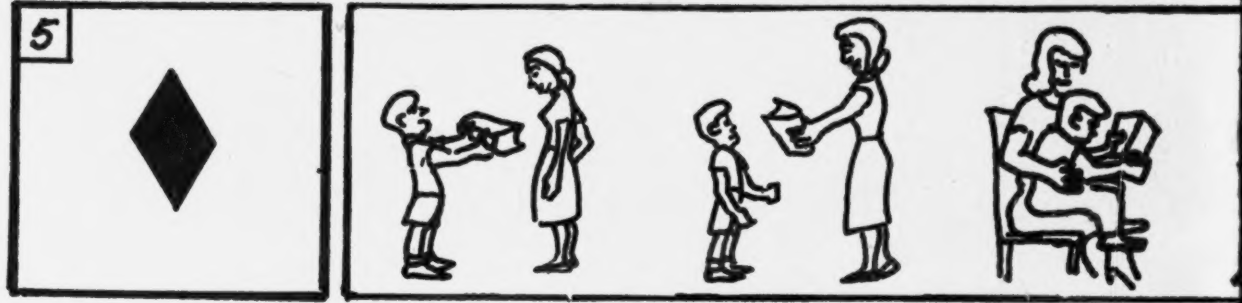

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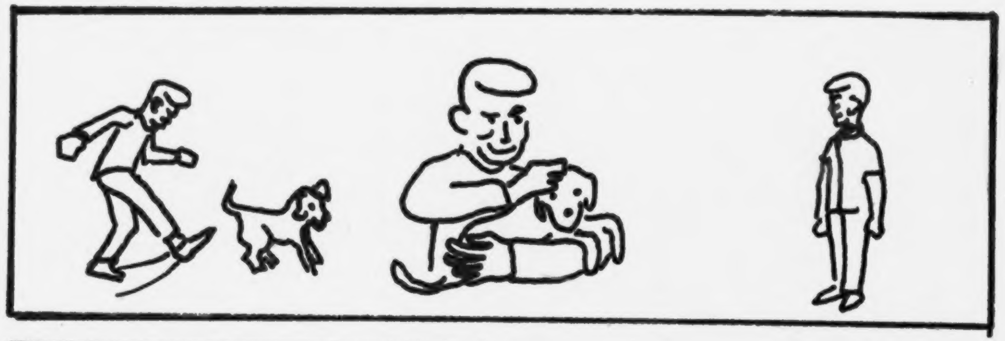

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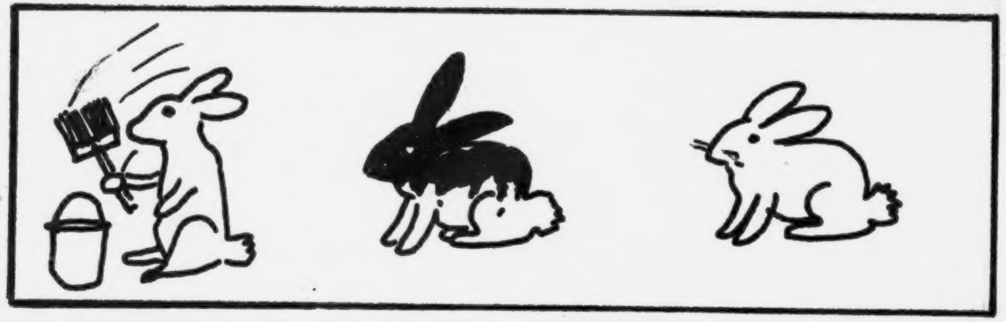

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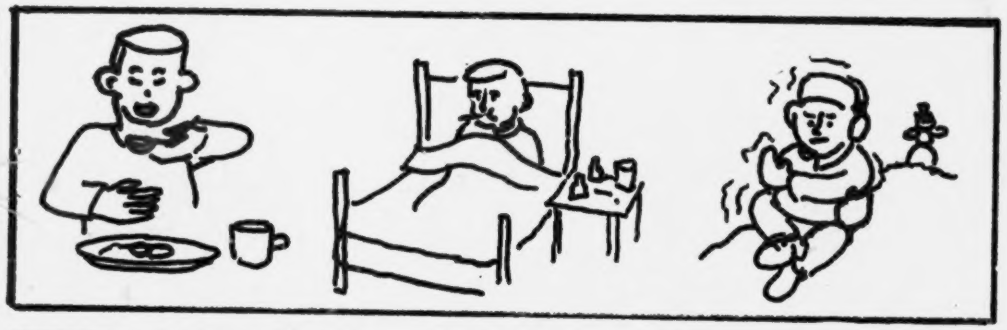

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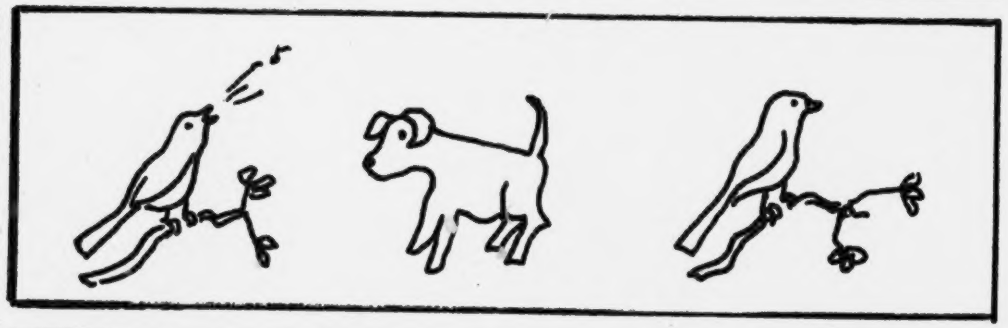

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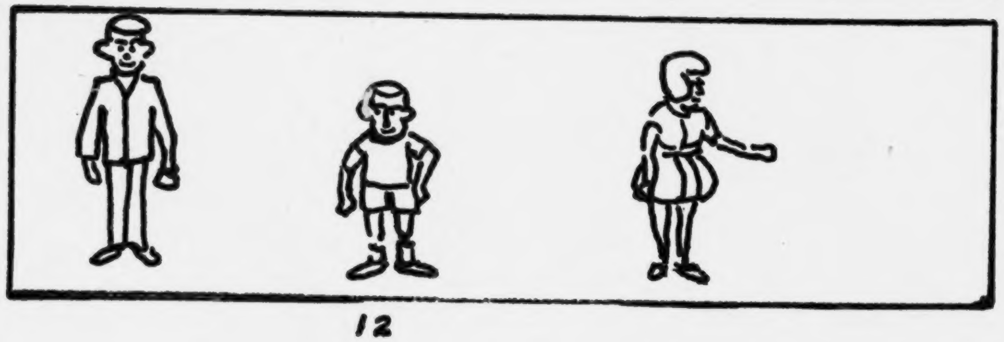

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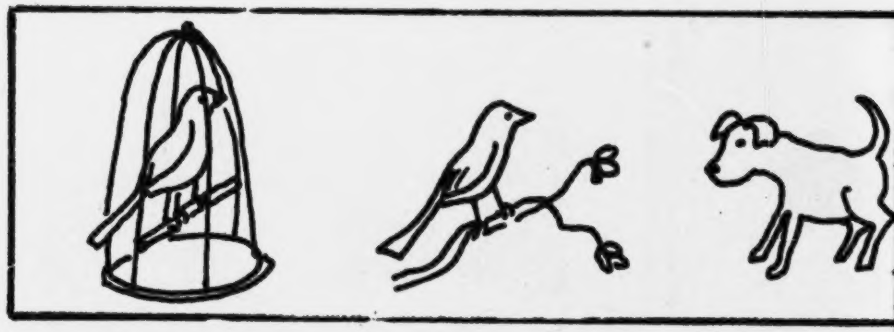

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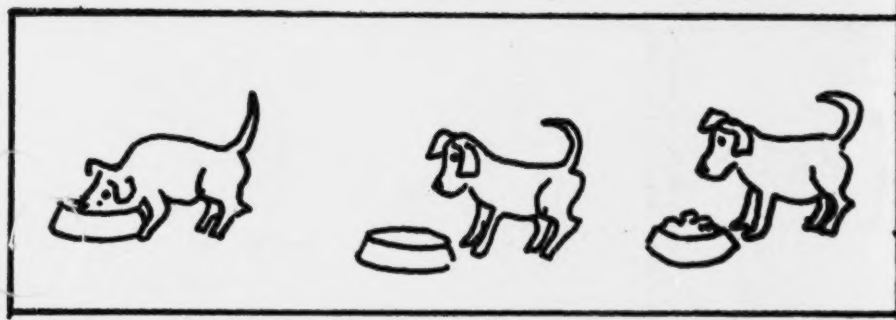

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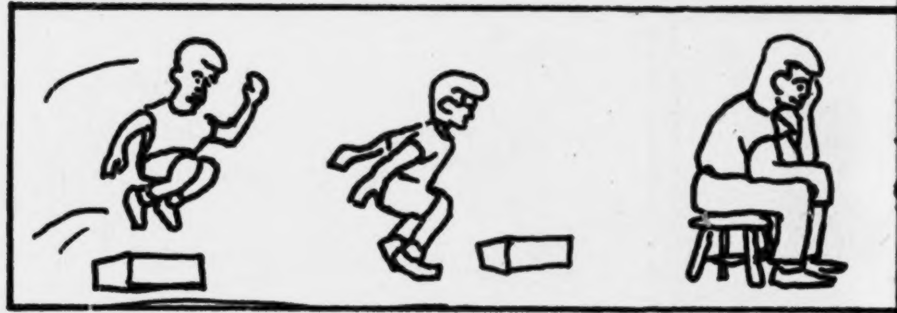

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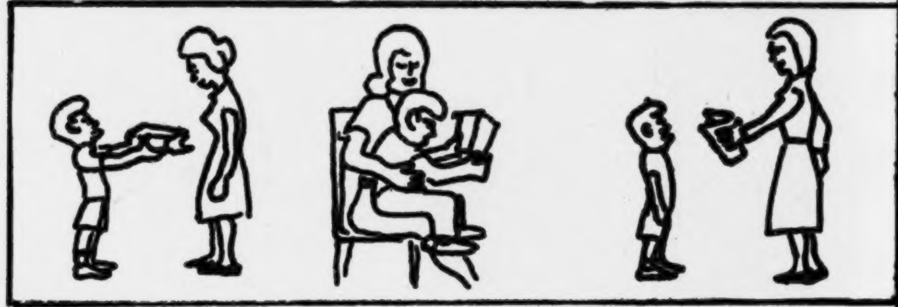

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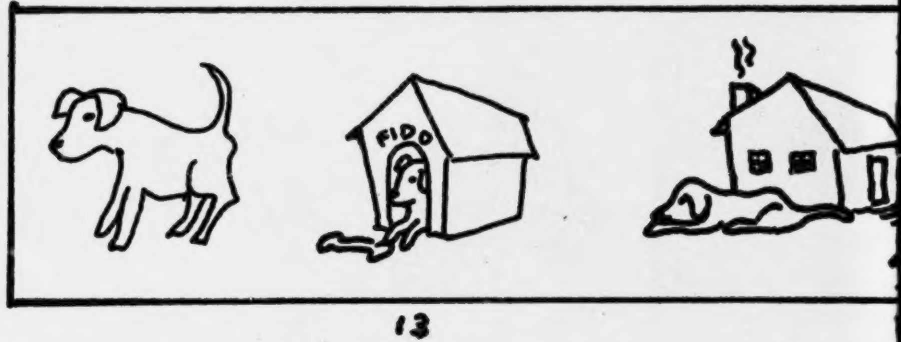

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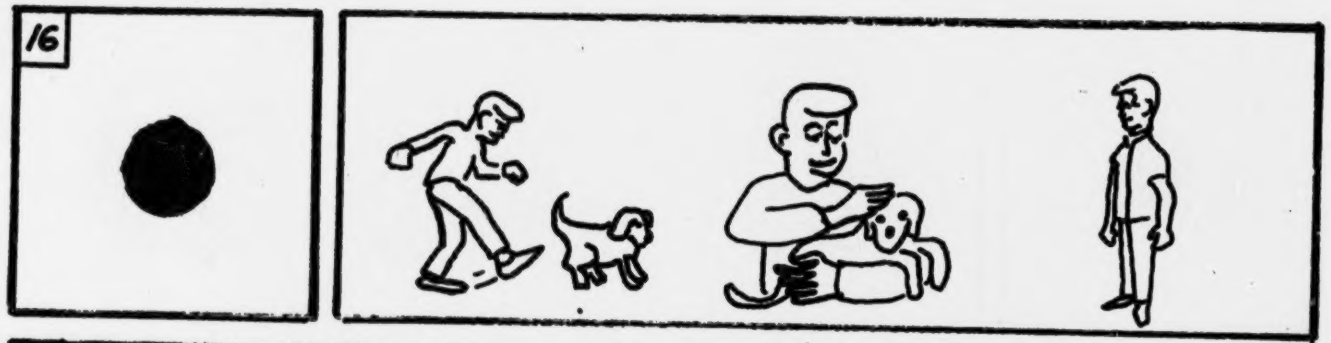

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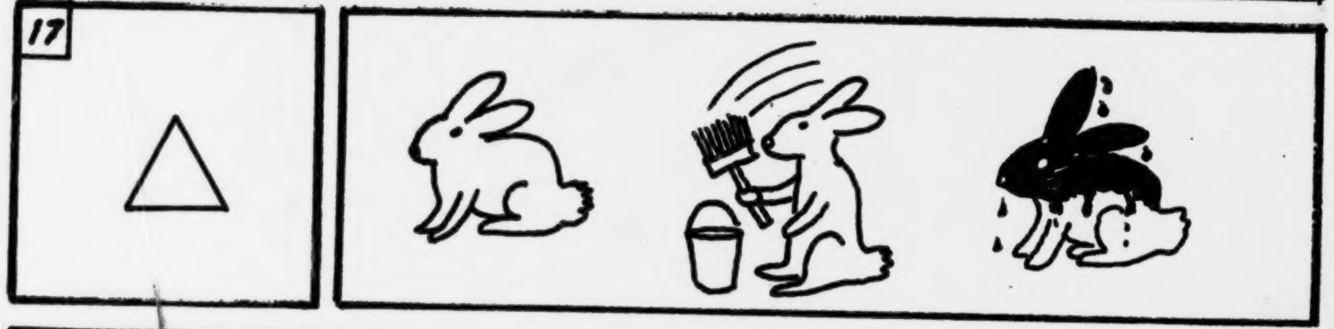

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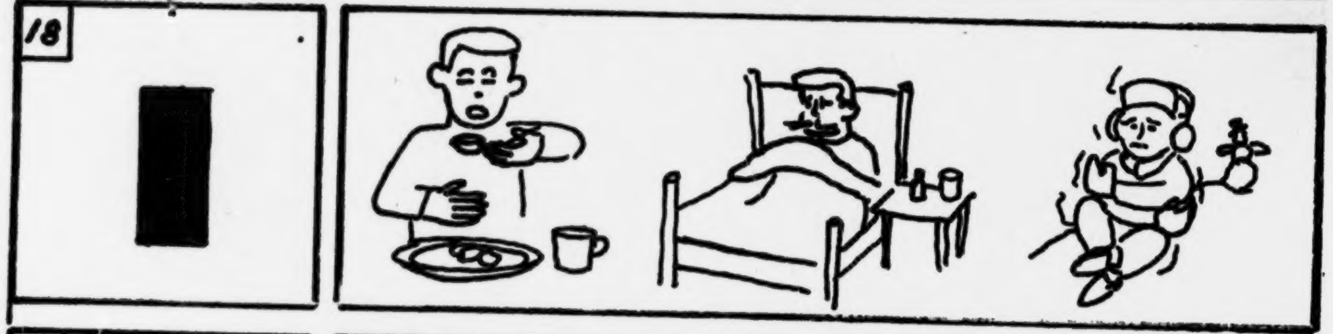

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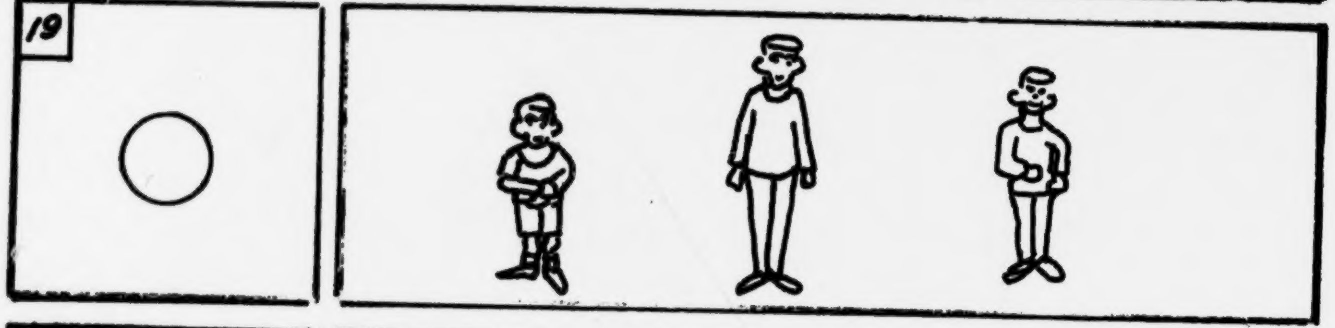

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